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Sub-Saharan Africa: Handbook of Selected Port and Air Facilities

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Sub-Saharan Africa: Handbook of Selected Port and Air Facilities

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This paper was prepared by the Office of African and Latin American Analysis, and with contributions from the Office of Current Production and Analytic Support.

Comments and queries are welcome and may be directed to the Chief, Africa Division, Office of African and Latin American Analysis,

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Sub-Saharan Africa: Handbook of Selected Port and Air Facilities

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Summary

Information available as of 1 May 1986 was used in this report.

The Soviet Union and the United States view access to air and naval facilities in Sub-Saharan Africa as important to the advancement of their interests on the continent and to assist allies in time of crisis. For the past several years the two states have attempted both to acquire facilities for their own use and to deny access to the other. Access to African air and port facilities is not crucial to either power, however, as each has other means of supporting deployments to the region.

The Soviets rely primarily on the use of naval auxiliaries to support their warships overseas. In addition, however, access to friendly ports allows the USSR to perform limited maintenance and replenishment tasks and rest for the crew that can extend the deployment time of the forces. The Soviets also have been able to expand the coverage of their maritime reconnaissance and antisubmarine warfare aircraft because of access to African airfields, although such access has sometimes been erratic.

At present the facilities that Moscow relies on have several major drawbacks, such as insufficient Soviet-controlled ammunition and fuel storage capabilities, although the Soviets sometimes attempt to compensate for this by using indigenous facilities. In addition, these facilities are vulnerable to insurgent attack and to the political whims of host countries.

The United States generally relies on shore-based facilities as well as large multipurpose replenishment ships to support overseas air and naval deployment. The island base at Diego Garcia, for example, supports operations in the Indian Ocean–Persian Gulf regions. The ability to respond to a crisis is improved considerably by having access to facilities along the African coast.

The United States has signed access or pre-positioning agreements with Kenya, Somalia, and Sudan in recent years. These complement arrangements with several West African governments, thereby enhancing the overall ability of the United States to conduct air and naval operations from Africa.

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Looking ahead, we believe the Soviet Union will continue to press for opportunities to expand access. The Soviets will probably concentrate on supporting their most important clients in Africa—Ethiopia and Angola—and might press for expanded access to facilities in these countries. Moscow also is likely to press other Soviet arms clients—Guinea and Mozambique, for example—for additional air and naval access.

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Contents

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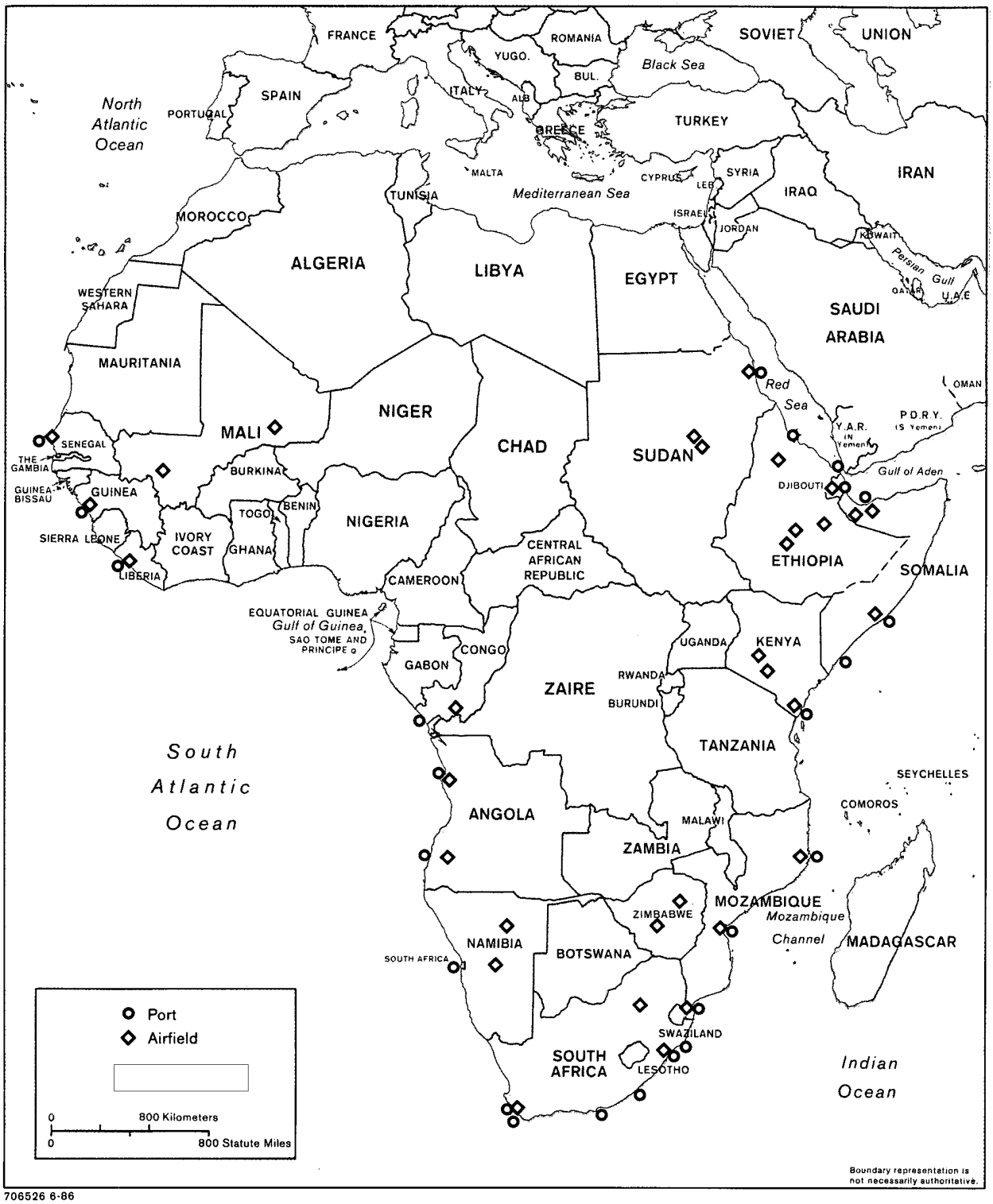
Figure 1
Selected Ports and Airfields in Africa



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Sub-Saharan Africa: Handbook of Selected Port and Air Facilities

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Introduction

This reference aid examines major Sub-Saharan ports and airfields that are or could be used by the United States or the Soviet Union to support their political and military objectives. Several countries that possess important air and naval facilities, such as Nigeria and Tanzania, were not included because we judge it unlikely that they would allow access to either major power. Basic data on the facilities included in this study—such as runway length, fuel storage capacity—are in a computer data base for rapid retrieval and comparative study.

Except where otherwise specified, the information on specific facilities is based on reporting by US embassies and defense attaches.

The Role of Strategic Facilities in Sub-Saharan Africa

We believe access to Sub-Saharan air and naval facilities is important, but not crucial, to both the USSR and the United States. Access facilitates the ability of Moscow and Washington to maintain a presence on the continent and to aid their respective allies in a time of crisis. Moscow, for example, used Malian airfields in 1975 to help ferry arms to the MPLA during the Angolan civil war, according to the US Embassy. Senegal, on the other hand, permitted US military transports to transit Dakar Airfield in 1983 to fly arms to Chadian President Habre. Access to African facilities also allows each superpower to expand its reconnaissance, antisubmarine warfare, and long-distance airlift capabilities.

The Value of Local Access to the Soviets. The Soviet Navy, according to a review of Soviet practices, is designed to fight a war in and near USSR home waters and, thus, has a limited afloat and foreign-shore based logistic structure. Because of this, the Soviet Navy relies primarily on afloat logistic support for warships operating overseas, using naval auxiliaries—tankers, cargo ships, tenders, and repair ships—or merchant ships under naval contract.

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According to military writings, the Soviet Navy, however, sees benefits in being able to perform logistic support in friendly ports, in having a stopover point for crew rest, and in having a local source for fresh water and perishable provisions. Observed behavior underscores this. Moscow often stations support and service vessels where the Soviets have free and regular access. Our analysis of Soviet naval movements indicates that, by performing pre- and post-transit upkeep or limited mid-deployment maintenance at such facilities, the Soviet Union can extend the deployment period for its forces. Indian Ocean Squadron submarines serviced at the Soviet facility at Ethiopia's Dahalak Island, for example, can remain on station longer before returning to their home fleet.

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The Soviets have access to several regional airfields, but tend to minimize their need for local support by rotating aircraft regularly and by relying on transport flights from the Soviet Union that carry spare parts as well as a small group of technicians on site to support Soviet reconnaissance aircraft. These aircraft, in our judgment, make an important contribution to Soviet surveillance efforts because of their ability to provide accurate information on the location of Western naval forces operating nearby, cover large areas quickly, and respond in a timely fashion. The small number of aircraft sent to each site, however, limits the Soviets' ability to carry out sustained flight operations.

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During regional conflicts, we believe the Soviets can use aircraft deployed abroad to provide intelligence to the host government. In addition, Soviet naval aircraft could be used for demonstrations to other governments of Soviet political support for the host government.

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Most air and naval facilities that the Soviets have access to are not sophisticated. According to several studies, these locations lack adequate repair and ammunition storage facilities and have insufficient fuel storage ashore to support Soviet air or naval units in high-intensity combat. The value of African facilities to Moscow is further tempered by their vulnerability to attack and the constant risk of eviction by the host government or a sudden change of political power.

In coming years the Soviet Union probably will attempt to augment the facilities it presently has in Sub-Saharan Africa. According to Embassy reporting, for example, Moscow has been trying for several years—but without expending significant political, economic, or military resources—to secure additional access in Cape Verde and Ghana in West Africa to diversify its basing options and to improve its capability to monitor the southeastern maritime approaches to Europe.

Use of Local Access by the West. Major Western navies, particularly the US Navy, continue to use shore-based support for forward-deployed units. The United States, for example, has bases in Europe, Japan, the Philippines, and the Indian Ocean Archipelago of Diego Garcia. The French Navy uses facilities at Djibouti to provide logistic and other support for its Indian Ocean deployments. Western navies also use large multipurpose replenishment ships to provide tactical logistic support while under way.

Western concern over foreign base availability is explained in part by the logistic distances involved. For example, although Diego Garcia has been developed into a support port for carrier battle groups and air operations, it is located more than 17,000 kilometers from the United States. Subic Bay in the Philippines is used for major repairs, but it is 12 steaming days away from the Arabian Peninsula–East Africa area.

Over the past few years, US access to African facilities has been on the rise. In the early 1980s, the United States signed air and naval access or prepositioning agreements with Kenya, Somalia, and Sudan to support military operations and to enhance Western efforts to monitor Soviet air and naval activity in the region. In addition, Djibouti allows US naval ships and aircraft to quietly use its facilities, although no formal agreement exists. Major construction has improved facilities in Somalia and Kenya, and Mogadishu is a participant in the yearly "Bright Star" military exercises that take place in the region involving the United States and other friendly regional states.

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The US Navy also uses African ports for replenishment and crew rest, especially in East Africa. The ability to refuel and replenish supplies from these ports eases the burden on US logistic forces and allows the United States to spend more time in the region. Moreover, staging naval reconnaissance flights out of locations such as Djibouti allows the United States to monitor Soviet naval activity in the Red Sea–Indian Ocean region. In West Africa, Senegal allows US aircraft on an ad hoc basis to monitor Soviet naval activity in the central Atlantic region.

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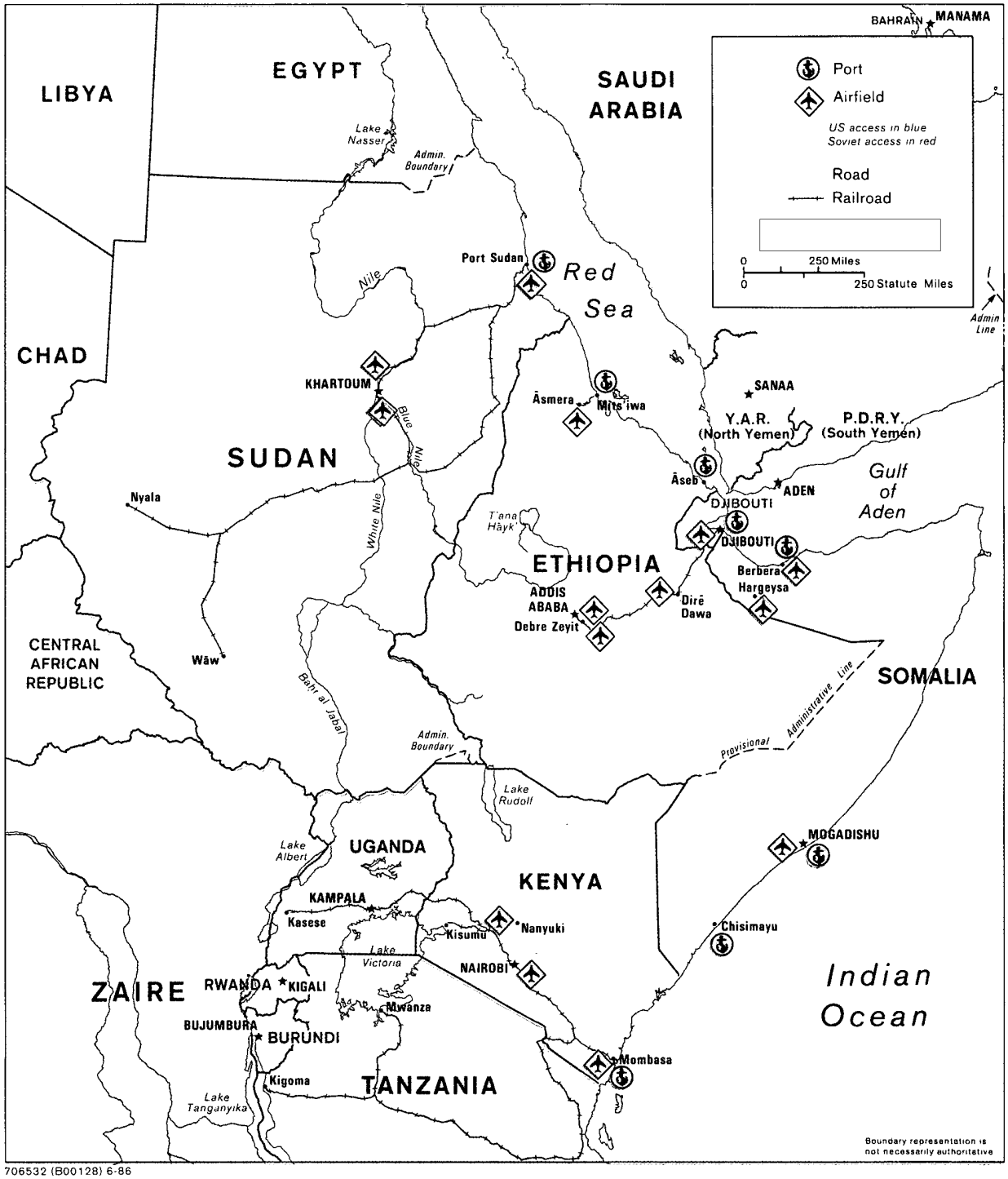
Figure 2
Selected Ports and Airfields in East Africa



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East African Ports and Airfields

Sudan

Overview

The military government that overthrew President Nimeiri last year held an election in April, fulfilling its pledge to return the country to civilian rule. We believe, however, that the civilian government led by Sadiq al-Mahdi will not be able to effectively address the economic, military, religious, and social problems besetting the country. In our opinion, the coalition of governing parties probably will suffer from factional infighting, poor leadership, and personal squabbles.

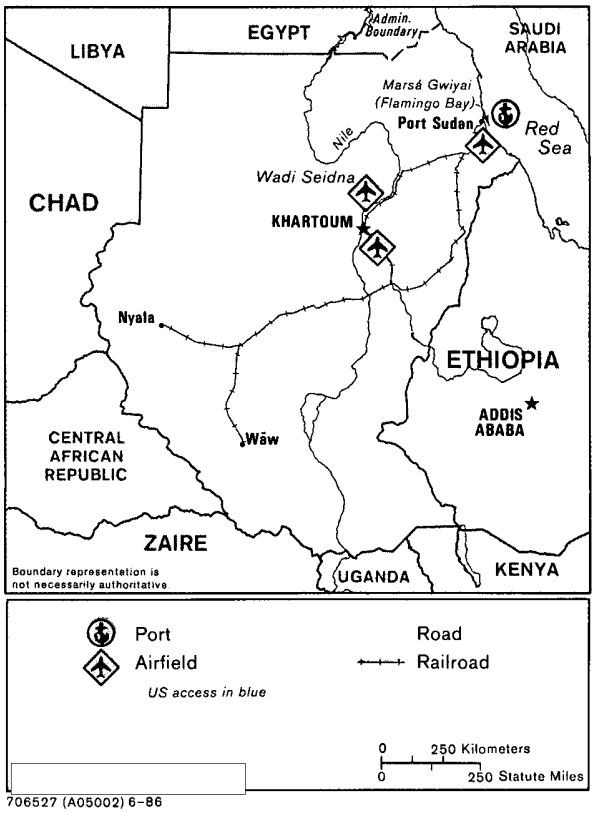
US Embassy and probably will be unable to end the Ethiopian-backed insurgency in southern Sudan. As a result, the insurgency is likely to continue draining the nation's economy, strain the military's unity and loyalty to the civilian regime, and force Khartoum to accelerate its effort to find new arms suppliers, such as the USSR and Libya.

We believe Khartoum's ties to Libya will increase as long as Tripoli continues to provide economic and military aid. Efforts will be made to keep Libyan subversive activity under control, but the weak Sudanese security system will be hard pressed to contain Tripoli if its access and influence in the military and government continues to increase.

For the near term, Sadiq is unlikely, in our opinion, to abrogate the 1983 agreement that gives the United States access and pre-positioning rights in Sudan, although the agreement will continue to be held in abeyance. Khartoum probably believes that formal termination of the agreement would adversely affect military and economic assistance from the United States.

Port Sudan is Sudan's only major port and handles over 90 percent of the country's trade. A Sudanese naval base is located at Marsa Gwiyai (Flamingo Bay), at the northern extremity of the city of Port Sudan.

Figure 3
Selected Port and Airfields in Sudan



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Sudan. report, Port Sudan is a relatively well-operated facility that can handle US roll-on/roll-off (ro-ro), container, and fuel/ammunition ships. Marsa Gwiyai (Flamingo Bay), on the other hand, has serious shortcomings, such as its limited depth of 5 meters, total lack of security fencing, and extremely limited storage space.

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Description. Port Sudan is a natural deepwater harbor formed by a narrow inlet in surrounding reefs. Entry to the port is rarely affected by bad weather,

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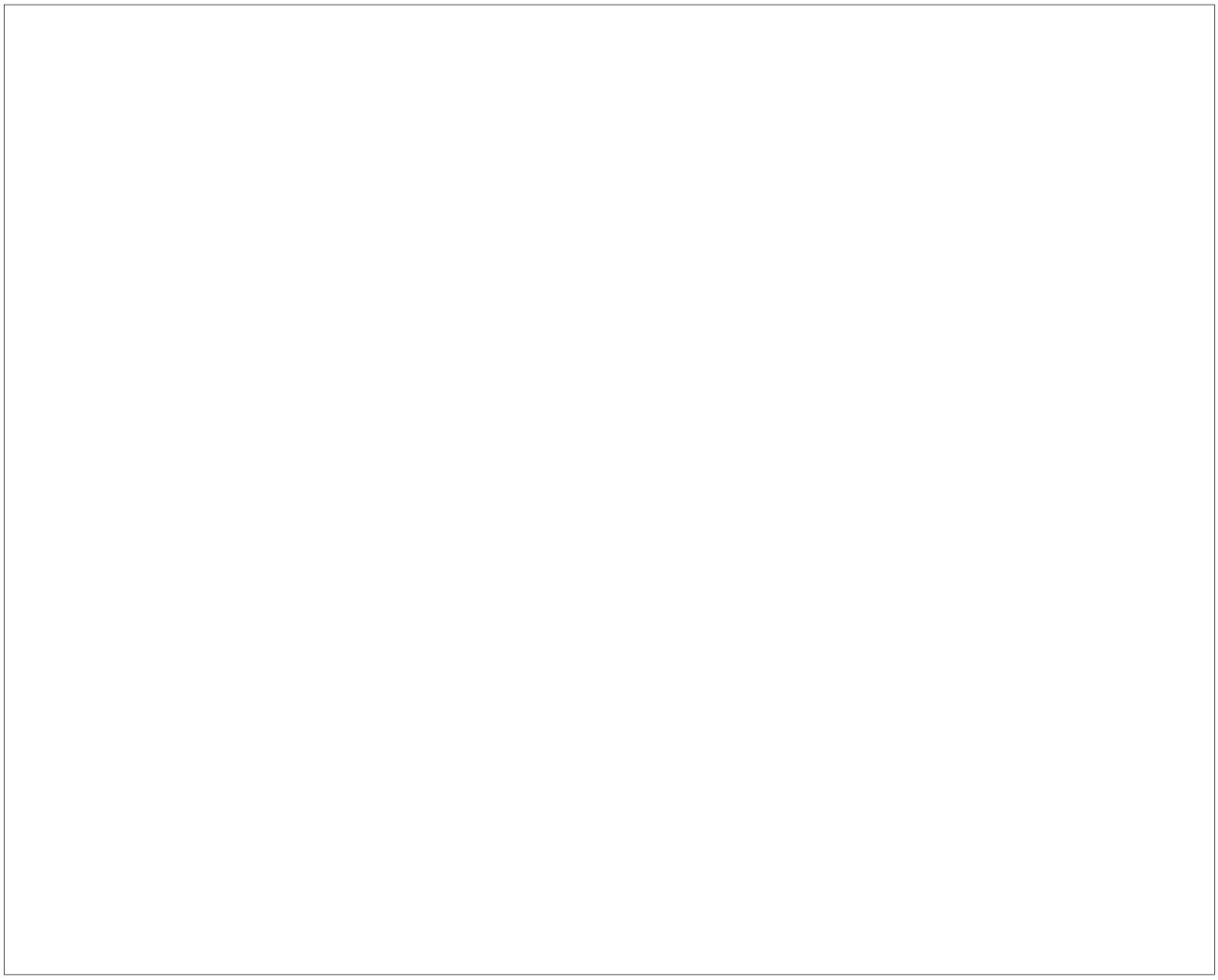

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and the approach is free and clear. The entrance to the harbor is 278 meters wide. There are four anchorages within the harbor and a number of mooring buoys. An additional anchorage is available approximately 10 kilometers south of the port that can accommodate 10 to 12 ships in about 70-meter depths over good holding ground.

The main quay has 2,600 meters of berthing space with depths of 8.5 to 10.6 meters alongside. There are three quays for special cargoes, containers, grain, and oil discharge, bringing total berthing length to 3,200 meters. The container facility consists of a 260-meter-long quay with two berths, one rail-mounted container crane, one contilever crane, and a lighted storage area with a capacity of approximately 700 twenty foot equipment units (20-foot container equivalent).

Thirty-four cranes of 5-metric-ton capacity are located on the main quay. Three mobile cranes of 35- and 50-ton capacity and one of 75-ton capacity are also available.

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There is adequate covered and open storage available in the port area. Within the customs area, there are 14 covered storage buildings with a total floorspace of 44,100 square meters. Open storage is virtually unlimited. The port has no drydock facilities, however, and only minor repairs can be carried out.

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The port is cleared by both road and rail. Two paved roads link the north port area to the airfield at Port Sudan and the Khartoum highway, both of which are

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located on the south side of the city. One of the highways passes through the city and is heavily congested; the other passes to the west of Port Sudan and joins the Khartoum highway 2 kilometers south of the airfield. A single-line narrow-gauge railroad connects the port with Khartoum and other large cities. The rail system has deteriorated in recent years due to the lack of money for repairs and new equipment, a shortage of skilled staff, and competition from the highway system. In addition, delays due to speed restrictions are frequent.

Patterns of Access. In March 1981, former President Nimeiri offered the use of Sudanese military facilities to the United States, and in 1983 Khartoum signed an agreement permitting the pre-positioning of US military equipment at Port Sudan. The agreement is in abeyance following the April 1985 coup, but has not been abrogated by the new regime.

Activity. The tonnage handled by Port Sudan has risen from 3 million metric tons in 1974 to over 4 million in 1983, the last year for which information is available. Current and planned projects probably will give the port a capacity of 5 million tons per year by 1990. Virtually all of Sudan's foreign trade passes through Port Sudan, with import volume exceeding export volume by as much as 3 to 1. Petroleum products account for approximately half of import volume.

Fuel Storage. Bunker fuel oil is available at tanker berths and by tank barge at the main quay or anchorage. Port Sudan also is the location of the country's only petroleum refinery, which has a capacity of 26,000 barrels per day.

Defenses. Sudan's naval base at Flamingo Bay, a part of the Port Sudan complex The patrol craft stationed there suffer from maintenance deficiencies, and the facility would be unable to provide much assistance in an emergency. The Sudanese Air Force occasionally deployed MIG-21s or Chinese-made fighters to the airfield at Port Sudan, but pilot proficiency and maintenance capabilities as well as fuel shortages have precluded this in the past year. Sudan's only SA-2 surface-to-air missile brigade is located at Port Sudan. The brigade has a good logistic and support facility but 25X1

equipment is over 15 25X1
years old and has deteriorated to the extent that the missile system is almost certainly ineffective. 25X1

Khartoum International Airfield (15°35′ N. 32°33′ E., 25X1

Wadi Seidna Airfield (15°49′ N. 32°30′ E., 25X1

Port Sudan Airfield (19°34′ N. 37°13′ E., 25X1

Khartoum International is the principal civil airfield and is capable of supporting sustained operations by heavy transports. Wadi Seidna, located near the capital, is the headquarters of the Sudanese Air Force and the most important military airfield in the country. Port Sudan Airfield is strategically located on the Red Sea and near the naval port, but lacks adequate support facilities. 25X1

Description. Khartoum Airfield is located on a level, semidesert area. It has natural and artificial drainage and is surrounded by a low floodwall to protect it from the Nile River. Khartoum has a 3,000- by 46-meter asphalt runway, which was resurfaced in 1981, and is able to handle aircraft up to and including the US C-5 military transport. The airfield has a control tower, approach control, very high frequency omnidirectional range-distance measuring equipment (VOR-DME), nondirectional beacon (NDB), and instrument landing system (ILS). Runway lighting is high intensity with sodium threshold and edge lighting. Taxiways have installed edge lights, and the parking aprons have floodlights. A modest field-level maintenance capability exists for both commercial and military aircraft. Khartoum Airfield is serviced by a two-lane bituminous highway, and a railroad spur connects the airfield to the main rail trunk. 25X1

Cargo handling at Khartoum Airfield is awkward and inefficient. Virtually no covered storage is available, although there are adequate open storage areas on various aprons and clear areas adjacent to the runways. Military cargo handling capacity is constrained by aircraft parking spaces. 25X1

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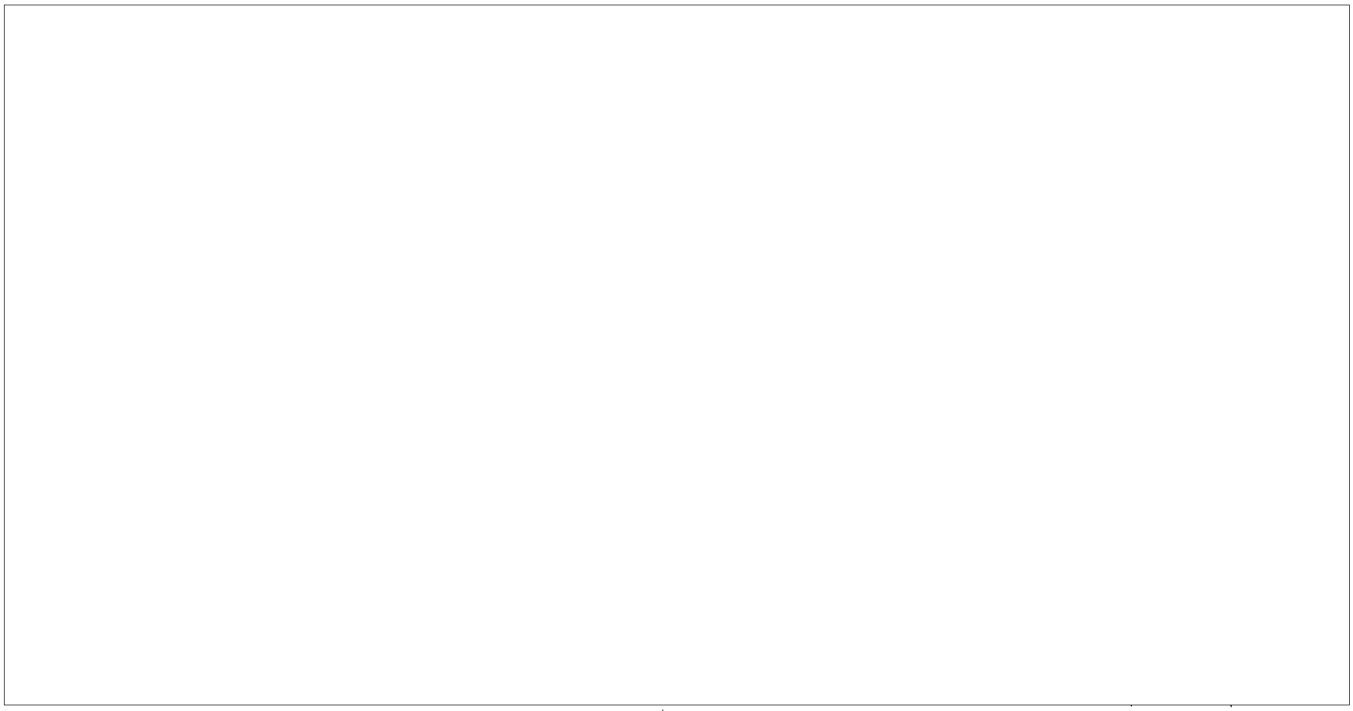

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Wadi Seidna, located 23 kilometers north of Khartoum, is the primary base for the Sudanese Air Force. It has a 3,170- by 46-meter asphalt primary runway and is capable of handling C-5 transport aircraft. The general condition of the airfield pavement, however, is fair to poor.

The control tower is operated by Sudanese Air Force personnel on an as-required basis. Runway and ramp visibility from the tower are poor. Wadi Seidna has no instrument flight rules (IFR) capability, radar approach control (RAPCON), ground-controlled approach (GCA), or standard instrument departure, although it does possess visual flight rules (VFR) and NDB capabilities.

Maintenance facilities include seven permanent aircraft hangars with various SAF maintenance specialist shops located in each. Aircraft ground support equipment is primarily of Soviet or Chinese origin.

Aerial port facilities and material handling equipment are virtually nonexistent at Wadi Seidna. There are extensive open storage areas but no available covered storage space. Wadi Seidna is serviced by an all-weather road that runs to Khartoum.

Wadi Seidna also is the main ordinance depot for the Sudanese Air Force. Four underground storage bunkers are located approximately 3 kilometers from the runway. In addition, at least five open ordnance storage areas are available.

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Port Sudan is primarily a civilian airfield but is occasionally used by the Air Force. It was built by the British prior to World War II and became a major civilian airport in the mid-1970s. The airfield is located 3 kilometers south of the port and has a 2,000- by 30-meter asphalt runway that can handle US C-130 military transports. Drainage around the airport is poor, and the runway pavement condition is assessed as fair to good. The single taxiway is generally in fair to good condition.

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The control tower is operated by Sudanese civil aviation personnel on an as-required basis. Runway and ramp visibility are good. Port Sudan has very high frequency omnidirectional range (VOR), IFR, visual flight rules (VFR), and NDB but has no RAPCON, GCA, or ILS capabilities.

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The airfield is accessible by a two-lane bituminous highway from the city of Port Sudan. It is located 3 kilometers north of a main passenger and freight terminal, which is the origin of the Sudan National Railway. A single-track narrow-gauge line has several branches and routes to points in Sudan.

There are no maintenance facilities at Port Sudan Airfield and ground support equipment is limited. No covered storage area exists, but extensive outside storage in close proximity to the parking ramp is available.

Fuel Storage. Khartoum Airfield has a storage capacity of approximately 42 million barrels of jet A-1 fuel, although only a small portion of this is used at any time. The storage tanks are located 3 kilometers from the airport. Aircraft are refueled by tank trucks.

Petroleum, oil, and lubricants (POL) storage at Wadi Seidna consists of 1,400 barrels of A-1 jet fuel on base and 4,800 barrels located 5 kilometers from the facility. Aircraft refueling is done by tank truck.

Port Sudan has a storage capacity of 450 barrels of A-1 jet fuel. The storage tanks are refilled by tanker truck from the refinery, which is located 5 kilometers from the airfield. Fuel is dispensed by tanker truck.

Activity. Sudan Airways is the primary user of Khartoum Airfield. Boeing 737, Fokker F-27 aircraft, and civilian wide-body aircraft operate from the airfield. The Sudanese Ministry of Defense also bases helicopters, C-130s, and other transport here.

The Sudanese Air Force operates Soviet-built MIG-21s, Chinese F-5s (MIG-17) and F-6s (MIG-19), and US F-5s from Wadi Seidna Airfield. Commercial jet aircraft have used the airfield on occasion.

Boeing 737 commercial jets, F-27s, and Sudanese Air Force C-130s routinely use Port Sudan Airfield and, on occasion, Sudanese fighter aircraft deploy to the airfield.

rated base security as marginal. Sudanese fighter aircraft and air defense forces would provide limited defense against air attacks.

Port Sudan is defended by SA-2 surface-to-air missile batteries, although their effectiveness is probably limited because of age and poor maintenance. Sudanese Army and naval forces in the area of the airfield would provide limited defense against ground or naval attacks. Overall security at Port Sudan, however, is probably marginal.

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Ethiopia

Overview

Ethiopia has been ruled since February 1977 by Mengistu Haile-Mariam, chairman of the ruling military council. He has moved the country along a Marxist-Leninist path and is one of the Soviet Union's firmest supporters in black Africa. Ethiopia established a Marxist-Leninist party in 1984, and Mengistu reportedly intends to proclaim the formation of a People's Republic in September 1986. The influence of the party has grown since its formation, according to the US Embassy, and political cadre are tasked to indoctrinate the population in the new ideology. The regime is using the famine and drought to force peasants onto collective farms in an effort to break their resistance to government control and to facilitate political indoctrination.

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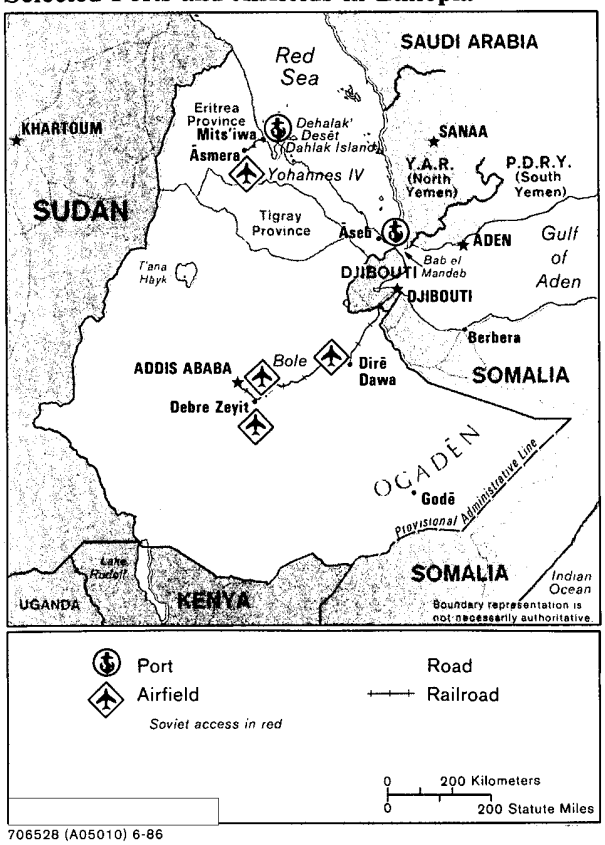
The Mengistu government faces two major insurgencies that it has been unable to suppress despite a commitment of vast numbers of men and material. The 25-year-old secessionist rebellion in Eritrea Province continues to drain the government's resources, according to US Embassy reporting. Although Addis Ababa has had some military success against the rebels over the past year, it has failed to score a decisive military victory or to disrupt rebel supply lines. Peace talks have taken place periodically between the two sides, according to the US Embassy, but we believe the prospects are poor for a political solution because neither side is willing to make political concessions.

Rebels in Tigray Province have been fighting since 1975 for autonomy or a greater share of power in the central government. The guerrillas have resisted several government military campaigns and remain in control of much of the provincial interior as well as Tigrean-inhabited portions of two adjoining provinces.

On the basis of US Embassy reporting, the Soviet Union has provided over $3 billion in arms to Ethiopia since 1977, enabling the country to establish the largest (approximately 210,000 troops) and most sophisticated military establishment in black Africa.

Figure 8
Selected Ports and Airfields in Ethiopia



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We estimate that Moscow has approximately 1,700 military advisers in Ethiopia; they are complimented by approximately 1,500 Cuban advisers and technicians and 2,000 Cuban troops stationed in Ethiopia's Ogaden region. The Soviet Union, in partial quid pro quo for its military aid, has been allowed to establish a small naval facility at Dahlak Island, off the Eritrean coast. In 1978, Ethiopia and the USSR signed a Treaty of Friendship and Cooperation.

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The US Embassy reports that there is opposition within the Ethiopia military to Mengistu's close ties to Moscow, but we believe his senior military commanders realize that only the USSR is willing to provide the arms needed to maintain the country's integrity.

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In addition, the regime, which has a pervasive security apparatus in both the military and civilian sectors, has moved ruthlessly against signs of dissent. We believe, based upon these factors, that Moscow will continue to play a key role in Ethiopia for the near term at least.

Dahlak Island Naval Facility (15°47′ N. 39°57′ E.,

Dehalak' Deset (Dahlak Island) is the only naval support facility for Soviet ships in the Red Sea–Indian Ocean region and plays a useful role in support of Soviet naval operations there. The facilities are modest even though Moscow has made steady improvements since development began in April 1978. Moscow is the primary tenant on Dahlak Island, but Ethiopian and South Yemeni naval vessels have limited access to some of the facilities. The Dahlak Island complex is vulnerable in the event of hostilities or heightened tensions.

Description. The Dahlak Achipelago is located in the Red Sea on the western edge of the sea lanes. The islands are located 50 kilometers from the Ethiopian port of Mits'iwa (Massawa), 300 kilometers from Saudi Arabia, and 600 kilometers from the Bab el Mandeb Strait.

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While commonly referred to as the Dahlak Island naval facility, the Soviet complex is actually located on Nokra Deset (Nokra Island), opposite Great Dahlak Island. It has clear sea approaches through a 10- to 20-meter deep entrance channel. The Dahlak facility itself includes barracks to accommodate up to 200 personnel, POL and water storage tanks, two floating piers, two helipads, air defense artillery revetments, security fences, and a power plant. Eight repaired buildings and 13 or more new buildings serve as

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storage and housing space. To complement the shore installation, the Soviets normally keep an 8,500-ton floating drydock, an oiler, at least one repair ship, and a submarine tender in the roadstead or docked at the floating pier. This combination of assets provides Moscow with limited maintenance and a light repair and resupply capability.

Patterns of Access. The facility at Dahlak was originally an Italian police post and later a British prison camp. The area was largely abandoned until April 1978 when the Soviets positioned the drydock in a channel next to the island. The drydock was transferred from the former Soviet facility at Berbera, Somalia, to South Yemen in late 1977 and was subsequently moved to Dahlak. A Soviet delegation visited Ethiopia prior to this move, apparently to conclude an agreement with the Ethiopian Government for use of the islands.

Soviet naval use of Dahlak increased from 40 calls in 1978 to 75 in 1983, peaking at 101 in 1981. Combatants, such as guided-missile cruisers and nuclear-powered submarines, regularly visit there for logistic purposes and maintenance. In addition, the Soviets have used the complex to unload for maintenance mechanized combat vehicles belonging to naval infantry units deployed aboard amphibious warfare ships.

Fuel Storage. There are POL storage facilities for approximately 10,900 barrels of refined products. These products probably include diesel fuel for generators and vehicles as well as aviation fuel for Soviet helicopters that are used to ferry personnel and supplies from Massawa to Dahlak Island. POL products at Dahlak are probably also available to fuel Soviet vessels on a contingency basis. A yard oiler brings fuel to Dahlak from South Yemen.

Defenses. To provide protection for the Dahlak facility, the Soviets have fenced off a large area that is guarded by a security unit of Soviet naval infantry numbering between 75 and 100 personnel. The unit has, two ZSU-23/4 radar-controlled mobile air defense guns and at least two armored personnel carriers. It is judged capable of defending the facility for a short time against small-scale air or ground attacks.

The Ethiopian Navy has a major base at the port of Massawa, and assets could be drawn from there and colocated Army units to augment the Soviet defenses if necessary. In addition, OSA-II missile attack boats and several patrol craft or frigates could also be used to defend Dahlak, if needed. 25X1

Aseb Port (13°00′ N. 42°45′ E., 25X1

Massawa Port (15°37′ N. 39°28′ E. 25X1

Aseb and Massawa are Ethiopia's only major ports. Aseb handles virtually all commercial traffic because of Massawa's decline due to age and extensive damage resulting from the Eritrean rebel siege of 1977.

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Description. Aseb is Ethiopia's principal port and is located on the northwestern side of Aseb Bay at the southern end of Ethiopia's Red Sea coastline. It has an estimated military port capacity of 4,100 tons per day. 25X1

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The approach to the port is free and clear and presents no difficulties. The improved, natural coastal harbor consists of a breakwater-protected inner harbor and a large outer harbor. Three deepwater channels with depths ranging from 10 to 16.5 meters lead into two entrances with depths of 11.6 meters. Tides are negligible. 25X1

The primary anchorage is in Aseb Bay, where depths of 7.3 to 10.9 meters can be found 8 to 13 kilometers from the port. There is also a much smaller anchorage 2 kilometers from the port with depths of 16.4 to 18.3 meters. 25X1

Aseb has two general cargo moles, each with one cargo handling quay front with two berths and one deepwater POL berth. Total berthing length is 975 meters in depths of 5.6 to 19.9 meters. At the oil berth for Aseb refinery, located 2.4 kilometers south of the port, tankers secure to mooring buoys. 25X1

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There are nine covered storage buildings within the port with a total floorspace of 27,500 square meters. Twenty-seven additional buildings are just outside the 25X1

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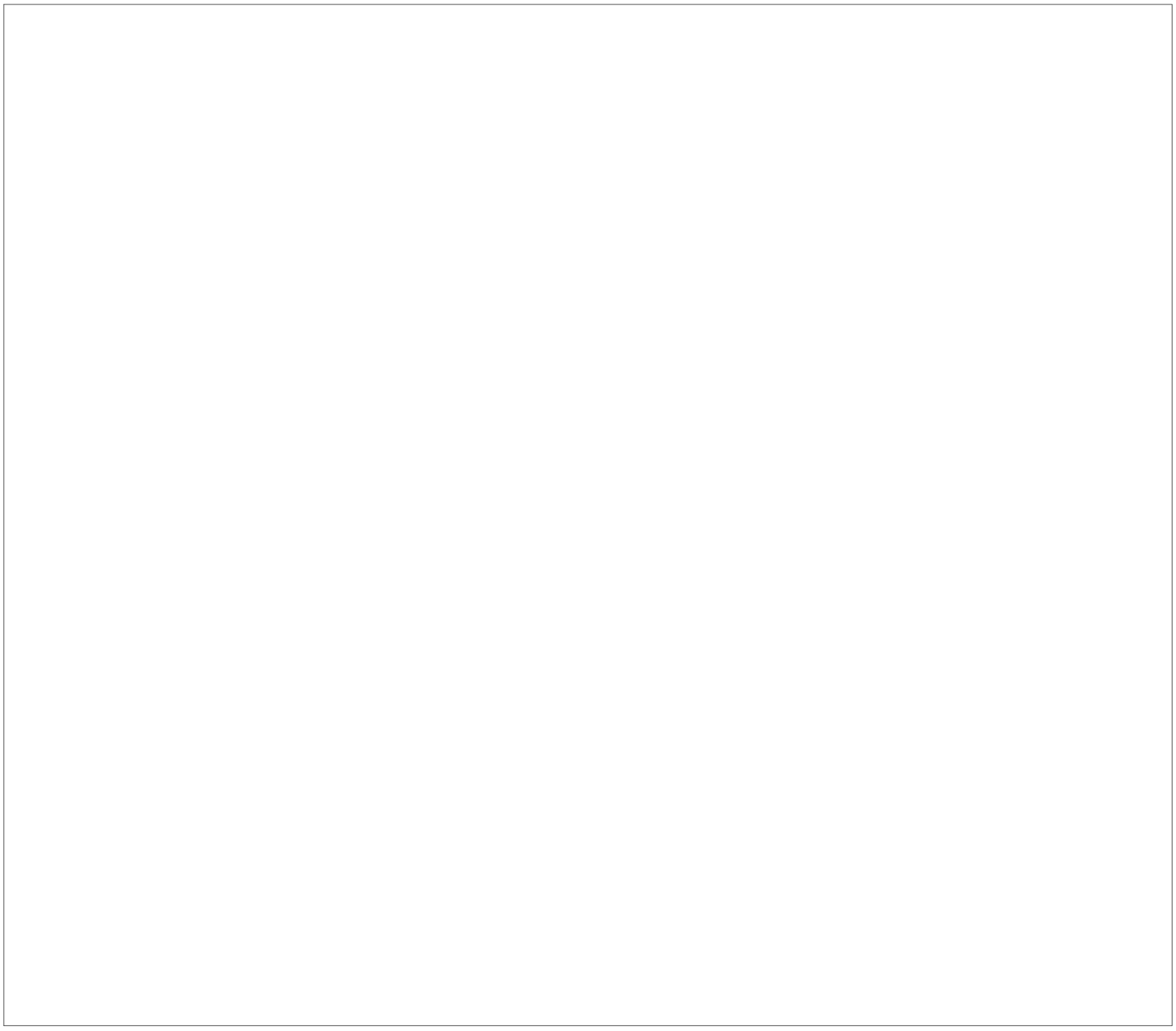

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port area with a total floorspace of 16,000 square meters. Four additional storage buildings are under construction. Open storage area is very limited.

The four general cargo berths are served by 18 East German portal jib cranes, 14 with 3- to 6-ton and four with 10- to 20-ton capacities. The port also has three tugs and two mobile cranes (90 and 150 ton).

Aseb has virtually no repair capability. The port is cleared by a two-lane all-weather highway that terminates in Addis Ababa, approximately 850 kilometers away. There is no rail service.

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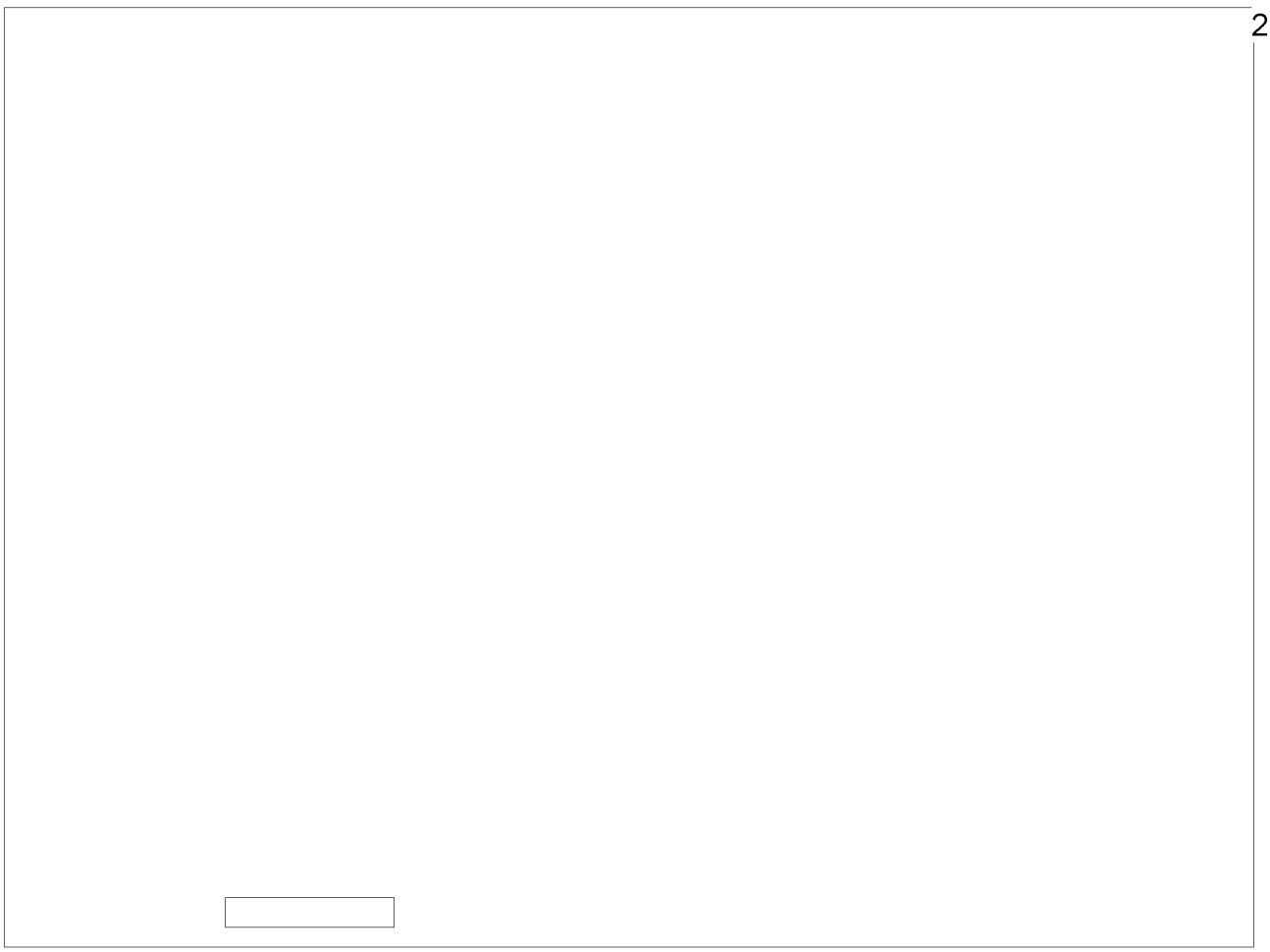

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25X1

Massawa is located on the Ethiopian Red Sea coast in the war-torn province of Eritrea. It is approximately 115 kilometers from the provincial capital of Asmera and serves as the principal operating base of the small Ethiopian Navy. The port consists of two peninsulas plus the islands of T'walet and Massawa, which are connected to the mainland by causeways. The improved natural harbor is divided into three bays and an anchorage. In total, Massawa has five separate anchorages, three for cargo ships and two for naval vessels. Its military port capacity is estimated to be 4,500 metric tons per day.

The approach from the Red Sea through Mits'iwa Channel is free and clear. The entrance channel to the outer harbor lies between coral reefs and has a controlling depth of 10 meters. There is one main commercial quay, served by six portal jib cranes; three additional quays—one for lighters—and nine small piers (one with a cargo conveyor system). Total commercial berthing length is 900 meters. Containers are handled at the main quay and there are two Ro-Ro berths. Four naval piers and one naval quay are also present.

25X1

Covered storage at Massawa is limited to 10 aging sheds with a total floorspace of 18,000 square meters. Open storage is very limited in the immediate port area, but ample space is available on the mainland. Mechanical handling equipment at the port is limited to six old portal jib cranes of 5-ton capacity, five

25X1

mobile cranes of unknown capacity, and specialized container handling equipment. Three tugboats also are available.

Massawa is cleared by a two-lane highway that connects the port to Asmera. At one time the port was also cleared by a narrow-gauge, single-track rail line to the interior of Eritrea. This line, however, has been inoperable since its destruction by Eritrean rebels in the mid-1970s.

There are no shipyards or drydocks, but Massawa has good workshops and minor ship repair work is possible. Massawa has a 300-ton marine railway in the inner harbor for small craft repairs.

Patterns of Access. Prior to 1978, Soviet combatants made infrequent calls to Ethiopian ports, generally in connection with the celebration of Ethiopian Navy Day. The Soviet sealift to Ethiopia during the 1977-78 Ogaden war resulted in a dramatic increase in Soviet port calls to both Aseb and Massawa. Soviet combatant calls to the ports have declined since late 1978, however, reaching a low of no port calls to Aseb in 1981.

US Embassy reporting indicates that Moscow has attempted to establish naval facilities at both Aseb and Massawa since the late 1970s. The Soviets apparently sought extensive access to the port of Massawa and wanted to build another port near Aseb for their exclusive use, but Ethiopian Chairman Mengistu resisted Soviet pressure and turned down the requests.

In practice, US naval combatants are denied access to both ports, although they are not officially banned by Addis Ababa. US commercial vessels have called at Aseb frequently in recent months to deliver famine relief material.

Activity. Aseb handles virtually all of Ethiopia's trade. Principal exports are coffee, hides and skins, and bulk salt. General cargo, crude oil, and refined petroleum products are the port's main imports. Aseb also is the primary port of entry for military equipment destined for the Ethiopian military.

Shipping activity at Massawa has declined substantially since the port area suffered heavy damage during the 1977 Eritrean siege. It is still the primary entry point for goods destined for Asmera and other northern Eritrean locations, but it does not handle cargo for other regions in Ethiopia. 25X1 25X1

Fuel Storage. Aseb has a storage capacity of approximately 665,000 barrels of refined products. In addition, the petroleum refinery located near the port can hold approximately 380,000 barrels of refined POL. New storage tanks now being built will add another 315,000 barrels to this total. Massawa is capable of storing approximately 314,000 barrels of refined products. 25X1 25X1

Defenses. Aseb is well defended by Ethiopian Army units, including brigade-size elements. Over the years, Eritrean rebels have raided the port area and adjacent targets but have never inflicted serious damage to the facilities. 25X1

25X1

25X1

25X1

A small number of Ethiopian naval patrol craft are based at Aseb. They provide a limited defense against naval combatants and infiltration along the Eritrean coast. 25X1

Massawa is the headquarters of an Ethiopian Army division, and several thousand troops are stationed in the city or along the Massawa-Asmera highway. These Ethiopian forces possess armor and artillery, and a system of defensive fortifications has been constructed to protect the land approaches to the city. There are no fixed surface-to-air missile sites near the port, but we believe Ethiopian troops have the SA-7 man-portable system. 25X1 25X1

Addis Ababa has a major airbase at Asmera, approximately 115 kilometers away. MI-24 HIND attack helicopters, MIG-21s, and MIG-23 fighter bombers are stationed at Asmera and could respond to an attack on Massawa if necessary. 25X1 25X1

Massawa is also home for most men and ships in the Ethiopian Navy. The Ethiopian naval base is only 2.5 kilometers north of the civilian port facility. OSA-II missile boats, Petya-class frigates, swiftships, patrol craft, and various support vessels also provide for the defense of Massawa. During the Eritrean siege, Ethiopian naval craft provided fire support for the ground troops and also offloaded supplies at the port.

Yohannes IV Airfield (15°17′ N. 38°54′ E.,

Harar Meda (Debre Zeyit) Airbase (08°42′ N. 39°00′ E.,

Aba Tenna Dejazmatch Yilma (Dire Dawa) Airfield (09°37′ N. 41°51′ E.,

Bole International Airfield (08°58′ N. 38°48′ E.,

Several airfields in Ethiopia are capable of supporting jet and transport aircraft operations. We believe the four airfields listed above, however, are the only ones that have the location and support facilities necessary for extensive flight operations. In fact, three of them—Yohannes IV, Harar Meda, and Bole—are used by the Soviet Union to support reconnaissance or airlift operations.

Yohannes IV Airfield, located in Eritrea Province, is one of the most important facilities in Ethiopia. Harar Meda is a major Ethiopian military airfield and the headquarters for the Ethiopian Air Force. Aba Tenna Dejazmatch Yilma Airfield, located near Dire Dawa, is the major military airfield for the Ogaden region and also serves as a civilian airport. Bole, located outside of Addis Ababa, is the country's principal civil air facility.

Description. Yohannes IV Airfield, located approximately 3 kilometers south of Asmera, is used for both civilian and military operations. It is not only an international airport and port of entry for Ethiopia, but it is also the major military airfield supporting air operations in Eritrea and Tigray Provinces.

The main runway at Yohannes IV measures 3,000 by 45 meters with an asphalt surface. It is capable of handling C-130, C-141, and C-5 transport aircraft, although the latter two would have to operate at reduced loaded weight. The airport has eight asphalt parking aprons with a total area of 188,633 square meters. 25X1
25X1

Yohannes IV has a control tower, approach control, very high frequency omnidirectional ranges tactical air (VORTAC), ILS, and Tactical Air Navigation (TACAN). Visual approach slope indicator lights are at the southwestern end of the runway. Approach lights extend from the southwestern end of the runway with lights also marking the thresholds and runway edge. 25X1
25X1
25X1
25X1

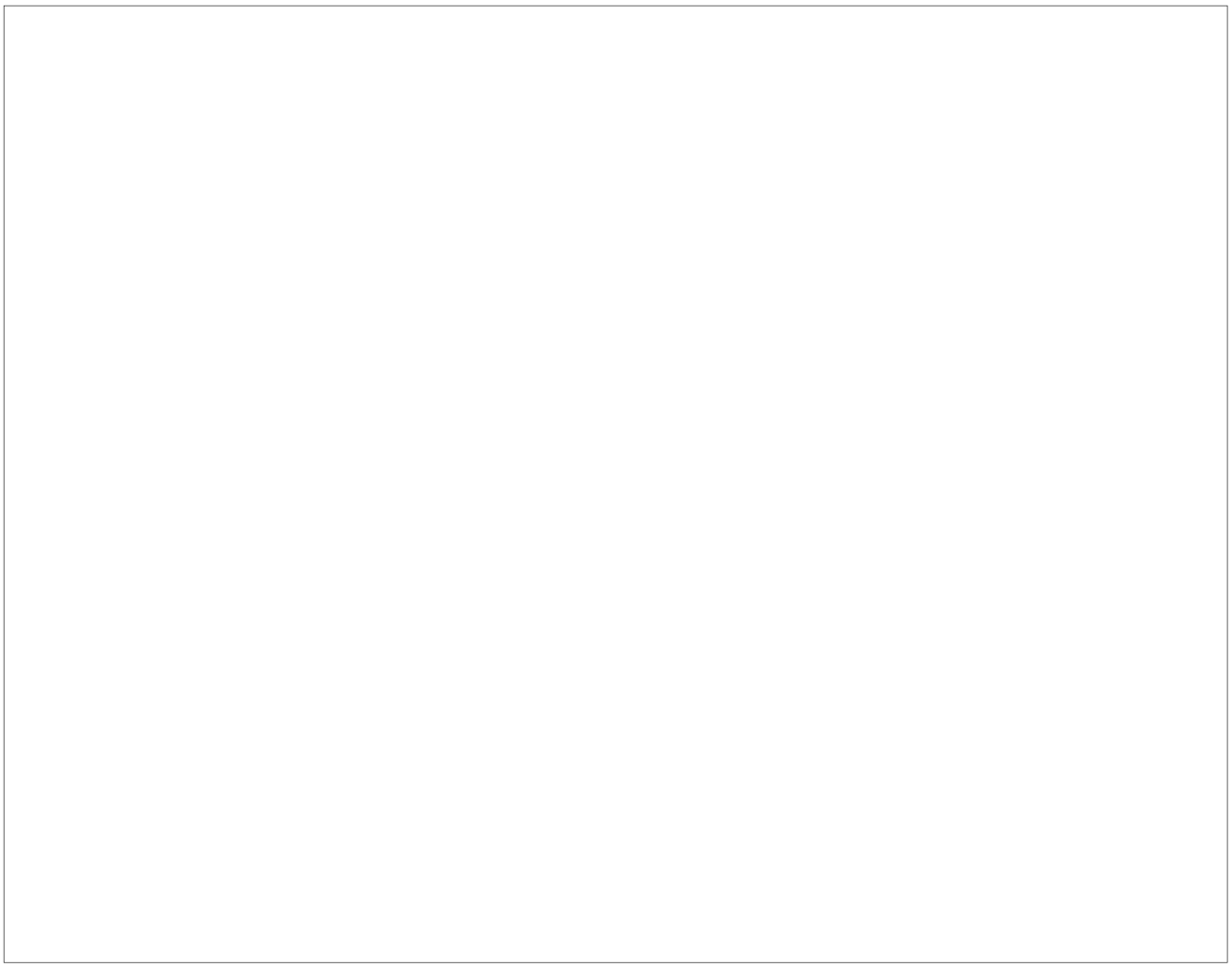
The civilian terminal area, located on the western edge of the airfield perimeter, consists of an asphalt terminal parking apron, an operations-terminal building, three hangars, two maintenance buildings, a firehouse, and three support buildings. 25X1
25X1

Yohannes IV is cleared by a two-lane bituminous highway. The airfield has an ammunition storage area that contains both buildings and bunkers. Yohannes IV has several hangars and maintenance shops. Ample storage facilities also exist. 25X1
25X1

Harar Meda Airbase—commonly called Debre Zeyit—is located approximately 5 kilometers from the town of Debre Zeyit. It is headquarters for the Ethiopian Air Force, a number of technical schools, aircraft and helicopter pilot training facilities, and rescue and transport operations. Debre Zeyit's 3,100-by 41-meter asphalt runway can handle C-130 and C-141 aircraft. It has six parking aprons with approximately 125,000 square kilometers of usable space. 25X1
25X1

Debre Zeyit has a control tower, IFR/VFR capability, approach control radio beacon, direction finding (DF), and TACAN. The airfield is serviced by a two-lane bituminous highway that leads to Addis Ababa. 25X1

25X1



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25X1

Aba Tenna Dejazmatch Yilma Airfield is a joint civilian-military facility located outside of the northern Ogaden city of Dire Dawa, and it is usually called Dire Dawa Airfield. It was built in 1956, and substantial improvements were completed in 1980.

Dire Dawa has a 2,705- by 45-meter concrete runway with five concrete parking aprons that provide approximately 50,000 square feet of space. The airfield can accommodate C-130, C-141, and C-5 transport operations, although the C-5 can only operate at reduced weight.

The airfield has IFR/VFR capabilities, a control tower, NDB, and TACAN. It is cleared by a 9.1-meter wide all-weather road. A railroad siding east-northeast of the airfield connects with the Addis Ababa–Djibouti rail line.

25X1

25X1

Bole International Airport, the major civilian port for Ethiopia, is located approximately 5 kilometers south of the capital of Addis Ababa. It has a 3,700- by 45-meter asphalt runway that can handle C-130, C-141, and C-5 aircraft. There are two asphalt parking

25X1

aprons encompassing approximately 141,000 square meters. The airport's over 2,300 meter-elevation, however, hampers flight operations because of the need to enforce weight restrictions.

Bole has seven hangars, and its workshops are able to do major repairs. It has an IFR/VFR capability, control tower, approach control, NDB, VOR-DME, and ILS. Bole is cleared by a two-lane all-weather road that leads to Addis Ababa. There is also a railroad spur at the POL area located near the north end of the field.

Fuel Storage. Yohannes IV has both JP-4 and A-1 jet fuel. Total storage capacity at the airfield is 3,600 barrels that is dispensed by truck. Debre Zeyit has JP-4 jet fuel with a storage capacity of approximately 4,800 barrels. Fuel is dispensed by both truck and hydrant. Dire Dawa Airfield has jet-B fuel with a storage capacity of approximately 1,600 barrels. The fuel is dispersed by truck. Bole International has both A-1 and JP-4 jet fuel. Total fuel storage capacity at Bole is 9,500 barrels, with fuel being dispensed by truck.

Activity. The Soviet Union deployed two IL-38 May maritime patrol and antisubmarine warfare aircraft to Yohannes IV from January 1980 until May 1984.

In May 1984, an Eritrean rebel sapper team raided Yohannes IV Airfield and, in addition to other aircraft, destroyed one of the IL-38s and seriously damaged the other. The Soviet Union has not replaced them and will probably not station aircraft at the airfield until the security situation stabilizes.

The Ethiopian Air Force has MIG-21 and MIG-23 fighters based at Asmera to support military operations in the north. MI-24 HIND attack helicopters are also deployed to Yohannes IV periodically. These aircraft are used extensively in ground support operations against Eritrean and Tigrean insurgents.

Debre Zeyit, an exclusively military facility, is the hub of Ethiopian Air Force activity. Almost all newly delivered aircraft are sent to Debre Zeyit for assembly and flight-testing. A variety of aircraft are mothballed at the airfield, including US-made F-5 fighters. Ethiopian fighters are rotated from Debre Zeyit to operational fighter bases at Yohannes IV, Dire Dawa, and Gode—a jet-capable airfield in the southern Ogaden region. 25X1

Debre Zeyit, along with Bole Airport, was one of the major termination points for the massive Soviet airlift of arms to Ethiopia that began in November 1977. 25X1

25X1

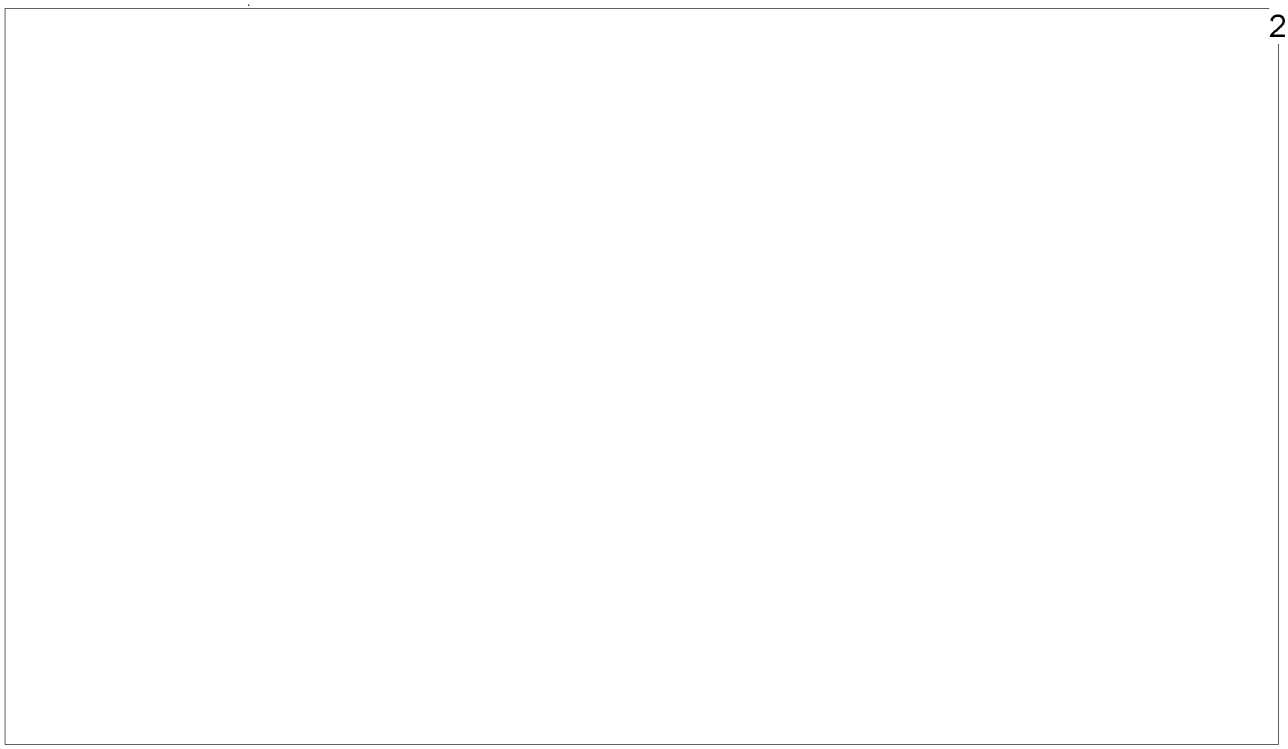
Dire Dawa is used by both Ethiopian and Djiboutian airlines for regularly scheduled flights between the two countries. Dire Dawa is also the home base for Ethiopian MIG-17, MIG-21, and MIG-23 fighter aircraft. From here, the Ethiopian Air Force can conduct operations in the northern and central Ogaden and northern Somalia. 25X1

Bole International is a major civilian facility that is used extensively by Ethiopian Airlines and several other major carriers, such as Alitalia and Aeroflot. The Ethiopian Air Force uses it occasionally for transport flights but fighters are rarely noted at the airport. Soviet transport flights also utilize Bole on occasion. Military VIP flights almost always arrive through this airfield. 25X1

Defenses. Yohannes IV Airfield is defended by Ethiopian Army forces equipped with armor and artillery. The provincial capital of Asmera is headquarters for the Ethiopian northern command as well as one Ethiopian division and several brigades. 25X1

Eritrean rebels have shown a capability to infiltrate the airbase and destroy or damage aircraft despite a strong government presence. In addition, the facility is vulnerable to long-range artillery. 25X1

25X1



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Aircraft stationed at Yohannes IV can defend against an air threat, and Ethiopian pilots are believed to be very proficient in an air defense role. Ethiopian planes also can be used to support ground troops if the base came under assault.

Debre Zeyit Airbase is defended by Ethiopian military personnel, who use stationary guard posts and roving patrols. The Ethiopian Army has an airborne training camp located near the base and could draw upon these forces if necessary.

Aircraft stationed at Debre Zeyit could be used in an air defense role if needed. In addition, the Ethiopians have two SA-2 surface-to-air missile battalions stationed around the airfield.

Dire Dawa Airfield is surrounded by several large Ethiopian Army camps located at Dire Dawa. The airfield itself is fenced and has both stationary and roving guards. It was successfully defended against two major Somali ground attacks during the Ogaden war. Aircraft based at the airfield can provide both air defense and ground attack support if needed. In addition, one SA-3 surface-to-air missile battalion is available to defend against any air threat.

25X1

Bole International is guarded by Ethiopian military and police personnel. Forces are stationed within the terminal itself while others roam the area.

25X1

25X1

Air defense artillery units are stationed close to the airfield for security, and aircraft could be rapidly deployed to the capital from Debre Zeyit if necessary.

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25X1

Djibouti

Country Overview

Djibouti, independent from France since June 1977, has been relatively stable under pro-Western President Hassan Gouled. According to the US Embassy, French influence remains prevalent, and French advisers and contract employees are found throughout the military, government, and civilian sector. Paris still has approximately 4,500 military personnel stationed in Djibouti and is responsible for defending the country against outside aggression.

The US Embassy reports that Djibouti has little economic potential because of its arid climate and lack of natural resources. Approximately two-thirds of the country's estimated 300,000 population lives in the capital city of Djibouti; the remaining third are nomads. According to the IMF, over three-fourths of Djibouti's gross domestic product is derived from activity associated with the port, railway, airport, private banking system, and the French military and civilian presence. Revenue from these sectors has declined sharply in recent years, however, creating high unemployment and other serious economic problems for the government.

In addition to its economic woes, the Gouled regime faces simmering tribal tensions and public disillusionment with blatant official corruption. Gouled's failure to address economic and social problems is weakening public support, according to the US Embassy. Although the regime is not immediately threatened, these unresolved issues and the economic decline do not bode well for the country's stability.

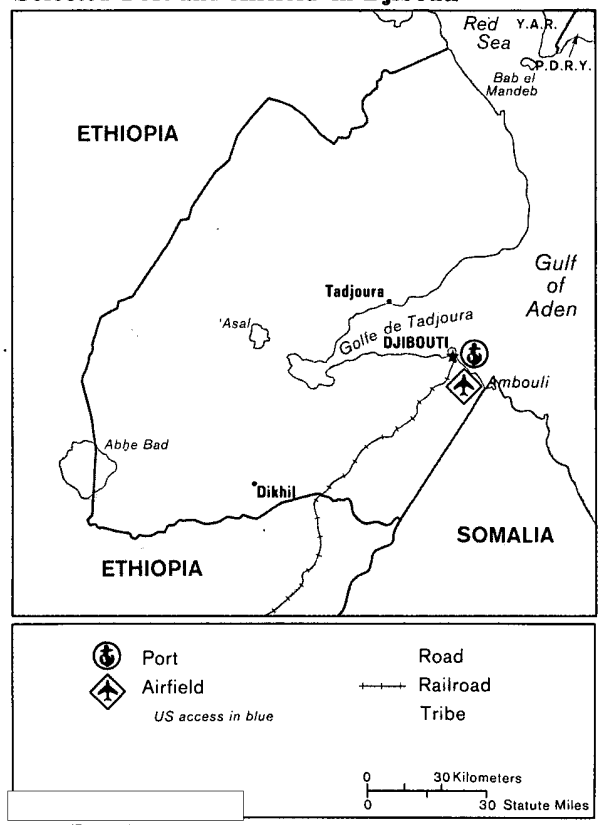
Djibouti Port (11°36′ N. 43°08′ E.

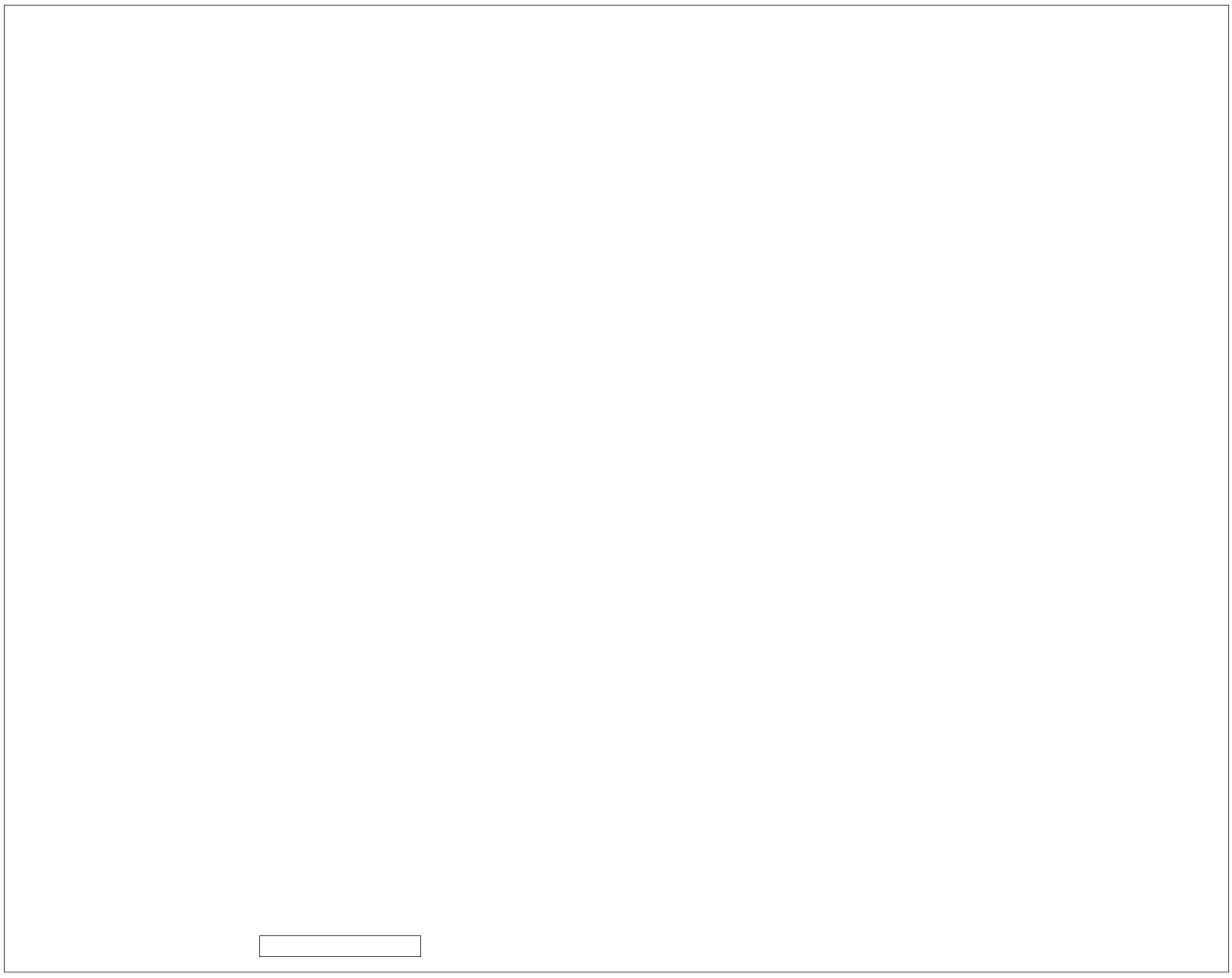
Djibouti is the capital and major port for the Republic of Djibouti. The port area consists of a commercial section and naval facility. Ethiopia uses the port for a small portion of its international trade and as the terminus of the Addis Ababa–Djibouti railroad. France, the former colonial power, has a naval contingent based in Djibouti to coordinate maintenance for ships of the French Indian Ocean Fleet.

Description. Djibouti port is an artificial harbor built on coral reefs at the northeastern end of a small peninsula. The approach to the port is free and clear and well protected by the natural configuration of the peninsula and the surrounding coral reefs. The inner harbor is used for offloading all types of cargo as well as naval berthing. Pilotage, although not mandatory, is recommended, especially for naval ships. The outer harbor is used for bunkering as well as for anchorage. Large numbers of all classes of ships can anchor in the outer harbor and at the designated anchorage area in the Golfe de Tadjoura. Holding ground consists of mud and coral with depths ranging from 12 to 21 meters. Both the inner harbor and the entrance channel are dredged periodically to remove silt.

The port has approximately 20 covered storage buildings with a total floorspace in excess of 40,000 square meters. There are nine mobile cranes on the quay, and the port has two container cranes of 40-ton capacity plus a floating crane with a capacity of 70 tons.

Figure 16
Selected Port and Airfield in Djibouti





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A single-track narrow-gauge rail line clears the port of Djibouti; this is part of the approximately 800-kilometer Djibouti–Addis Ababa rail line. All the principal quays within the port are serviced by rail. Two bituminous-surfaced roads also clear the port with one leading to Djibouti/Ambouli Airport and the other toward the Ethiopian border.

Djibouti has a small shipyard capable of performing minor hull and engine repairs. There are three marine railways, the largest of which has a 500-ton capacity and is 120 meters long. There are no drydock facilities.

Patterns of Access. Prior to independence in 1977, Djibouti was the headquarters for the French Indian Ocean Fleet. In addition, the French Army and air force had units stationed there. In the postindependence period, France was able to maintain its military presence by concluding a military cooperation agreement that committed Paris to defending the republic against outside aggression. As a result, approximately 4,500 French naval, air, and Army personnel are stationed in Djibouti. At least one naval ship is in port at all times, and the French air force maintains a squadron of 10 Mirage-III fighters and various transport and helicopters in the country.

25X1

25X1

25X1

The United States frequently uses Djibouti's naval facilities for port calls and to support its Indian Ocean operations. Although President Gouled is reluctant to sign a formal access agreement with the United States, he approves almost all clearance requests. The Soviet Navy rarely makes port calls in Djibouti.

Activity. Use of the port by commercial vessels has declined significantly over the past 10 years. According to the US Embassy, Djibouti has been unable to capture new business for the port despite the reopening of the Suez Canal. The Embassy reports that the number of ships calling at the port has fallen by one-third since 1977, total bunkering tonnage is off nearly 40 percent during the same period, and tonnage of all types handled by the port has declined 20 percent.

Fuel Storage. Djibouti port has a combined refined POL storage of 1.6 million barrels in 40 storage tanks of varying sizes.

Defenses. Security at the port is provided by the French and Djiboutian military. French ground forces in the capital number approximately 3,000 men and possess light tanks, armored reconnaissance vehicles, howitzers, and other weapons. The Djiboutian Navy has several small patrol craft while the Army has 20 reconnaissance vehicles and light artillery.

Djibouti/Ambouli Airfield (11°32′ N. 43°09′ E.,

Ambouli, the only airfield in the republic with a paved runway, is located approximately 5 kilometers from the port. It is used jointly by the military and civilian airlines. Ambouli can handle C-130, C-141, and C-5 transports as well as Boeing 747 airliners.

Description. Ambouli has a 3,140- by 45-meter asphalt runway with six asphalt parking aprons, the largest of which is 381 by 183 meters. The airfield has a control tower, approach control, NDB, VOR-DME, instrument landing system (ILS), and TACAN. Ambouli has five hangars, two of which belong to Air Djibouti and the third to Air France. The primary technical drawback of the airport is caused by the summer heat. The lower density of air at high temperatures makes takeoff more difficult and the permissible payload of wide-bodied aircraft has to be reduced. This problem is overcome to a large extent by scheduling takeoffs at night. 25X1 25X1

Fuel Storage. Jet A-1 fuel, which is dispersed by truck and hydrant systems, is received from storage tanks approximately 5 kilometers from the airfield. Approximately 23,000 barrels of fuel are in above-ground storage tanks. In addition, there is at least one underground storage tank. 25X1 25X1

Activity. France uses the airfield to support its Indian Ocean Fleet and to conduct periodic naval reconnaissance flights in the region. The French have 10 Mirage-III fighters, Noratlas transports, and several helicopters stationed at the airfield. 25X1 25X1

Although the United States has no formal access agreement with Djibouti, the government approves on a regular basis Navy P-3 naval reconnaissance flights to and from Djibouti and permits regular supply flights in support of naval operations in the area. 25X1 25X1

The Soviet Union has no military access to Ambouli, although civilian VIP flights occasionally transit the airport. 25X1

Defenses. The military section of Ambouli is separate from the civilian operating area and access is controlled. Security is provided by French and Djiboutian military personnel. 25X1 25X1 25X1

25X1

Somalia

Overview

The government of President Siad is beset by a growing array of political, military, and economic problems that are slowly undermining stability, according to US Embassy reporting. Siad's once-broad tribal support base has narrowed to his Marehan clan and its tribal allies. His use of the Army to try to suppress tribal fighting and to enforce internal security has alienated large segments of the population and created fissures within the military.

25X1

At the same time, dissatisfaction is also increasing within the military over the growing inferiority of Somali forces to those of archrival Ethiopia. Many senior and midlevel officers are critical of the lack of Western military support and they have advised Siad to loosen his ties to the West, according to US Embassy and

25X1

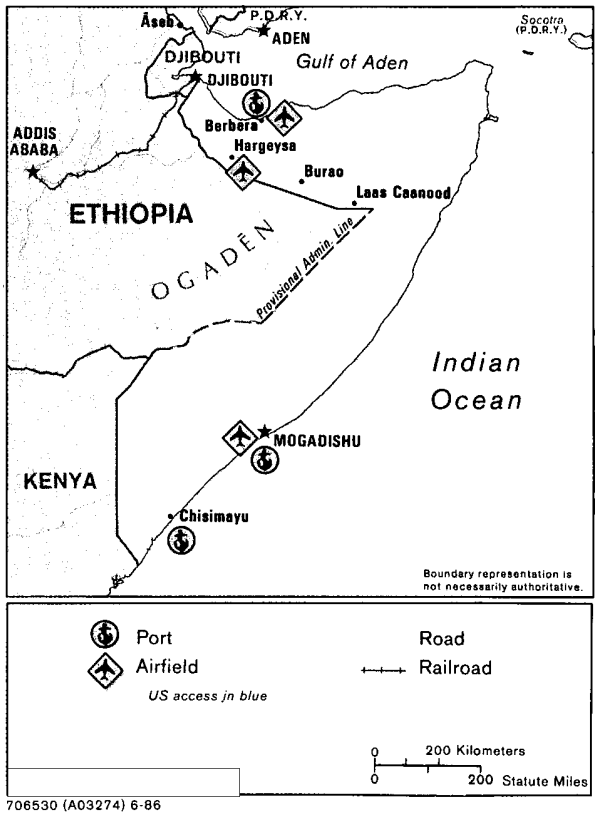
The country's economy continues to stagnate, and it has been unable to conclude an IMF agreement because of the paucity of foreign exchange. According to US Embassy reporting, Siad is under pressure from his cronies and other key advisers to revoke several economic reforms instituted last year. The President has been reluctant to do so, however, and has instead attempted to find alternative funds. Mogadishu's reestablishment of diplomatic relations with Libya last year, for example, was motivated, we believe, in part by expectations that Tripoli will pump money into the Somali economy.

The Siad regime faces an armed threat from two groups that receive economic and military support from Ethiopia.

the effectiveness of both groups, however, is hindered by their narrow tribal bases, although they are capable of conducting limited cross-border operations against isolated Somali military units.

In 1977, Siad abrogated the 1974 Soviet-Somali Treaty of Friendship and Cooperation, expelled all Soviet military personnel, and ended Moscow's access to Somali air and naval facilities. We believe Siad, in part, was retaliating for Moscow's support of Ethiopia during the Ogaden war. In August 1980, Siad signed

Figure 19
Selected Ports and Airfields in Somalia



25X1

an access agreement with the United States granting Washington use of ports and airfields at Mogadishu and Berbera. The United States has provided Somalia over $60 million in arms assistance since 1981 in an effort to improve Mogadishu's defensive capabilities.

25X1

25X1

Berbera Port (10°26′ N. 45°00′ E.,

25X1

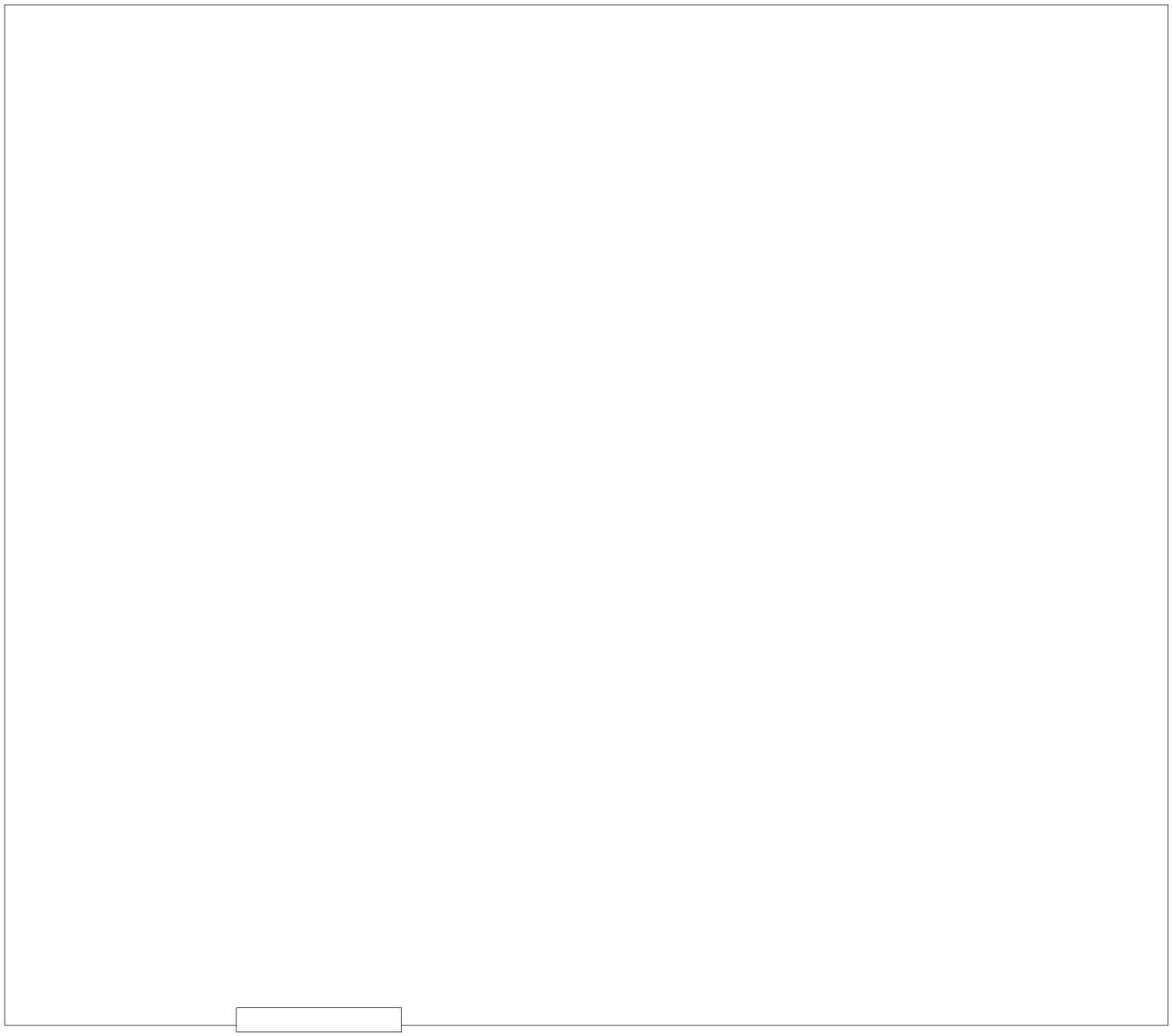
Mogadishu Port (02°01′ N. 45°20′ E.,

25X1

Chisimayu Port (00°22′ S. 42°33′ E.,

25X1
25X1

Somalia has three major deepwater ports—Berbera, Mogadishu, and Chisimayu. Berbera is strategically important because it overlooks the southern entrance



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to the Red Sea. Mogadishu is the country's most important commercial port and one of Africa's newest, having been completed in 1978. Chisimayu is a small commercial port located 200 kilometers north of the Kenyan border that is not being used to its full potential.

Description. Berbera Port is situated in a small natural harbor on the northern coast of Somalia and was completed in 1969 with considerable economic assistance from the Soviet Union. The port functions commercially as an exporter of livestock and for the discharge of commercial goods for northern Somalia and military equipment for northern units. Berbera has an estimated military port capacity of 2,600 tons per day.

25X1
25X1

The port has a small natural harbor approximately 2.5 kilometers long and 800 meters wide with depths of 9 to 18 meters. Approaches from the sea are deep

25X1

25X1

and clear. Extensive anchorage in depths of 19 meters over good holding ground is available off the harbor entrance. Anchorage is available for four medium ships within the harbor.

There are two deepwater, general cargo berths, one naval berth, one POL berth, three lighter berths, and a recently completed Ro-Ro ramp. The port has over a kilometer of total berthing space suitable for general cargo in depths ranging from 1 to 9.1 meters. The offshore terminal used for unloading crude oil is located on the west side of the harbor. Berbera is serviced by three portal cranes, one floating crane, and several tugs and lighters.

There are approximately 10 covered storage buildings with a total floorspace of 11,100 square meters, and there is plentiful open storage space.

The port is cleared by two hard-surfaced roads, one leading to the city of Hargeysa and the other to Burao and Laas Caanood. The port has no rail clearance.

25X1

Berbera has no drydock facilities but does possess a well-equipped workshop for minor repairs.

25X1

The port of Mogadishu is located on Somalia's Indian Ocean coast and consists of a manmade, breakwater-protected harbor—completed in 1978—with six deep-water alongside berths. The harbor is dredged to a depth of 11 meters. The port used to be located 2 kilometers to the north where shallow depths necessitated the use of lighters for cargo operations. The old harbor is no longer used as a maritime port. The estimated military port capacity of Mogadishu is 3,600 tons per day.

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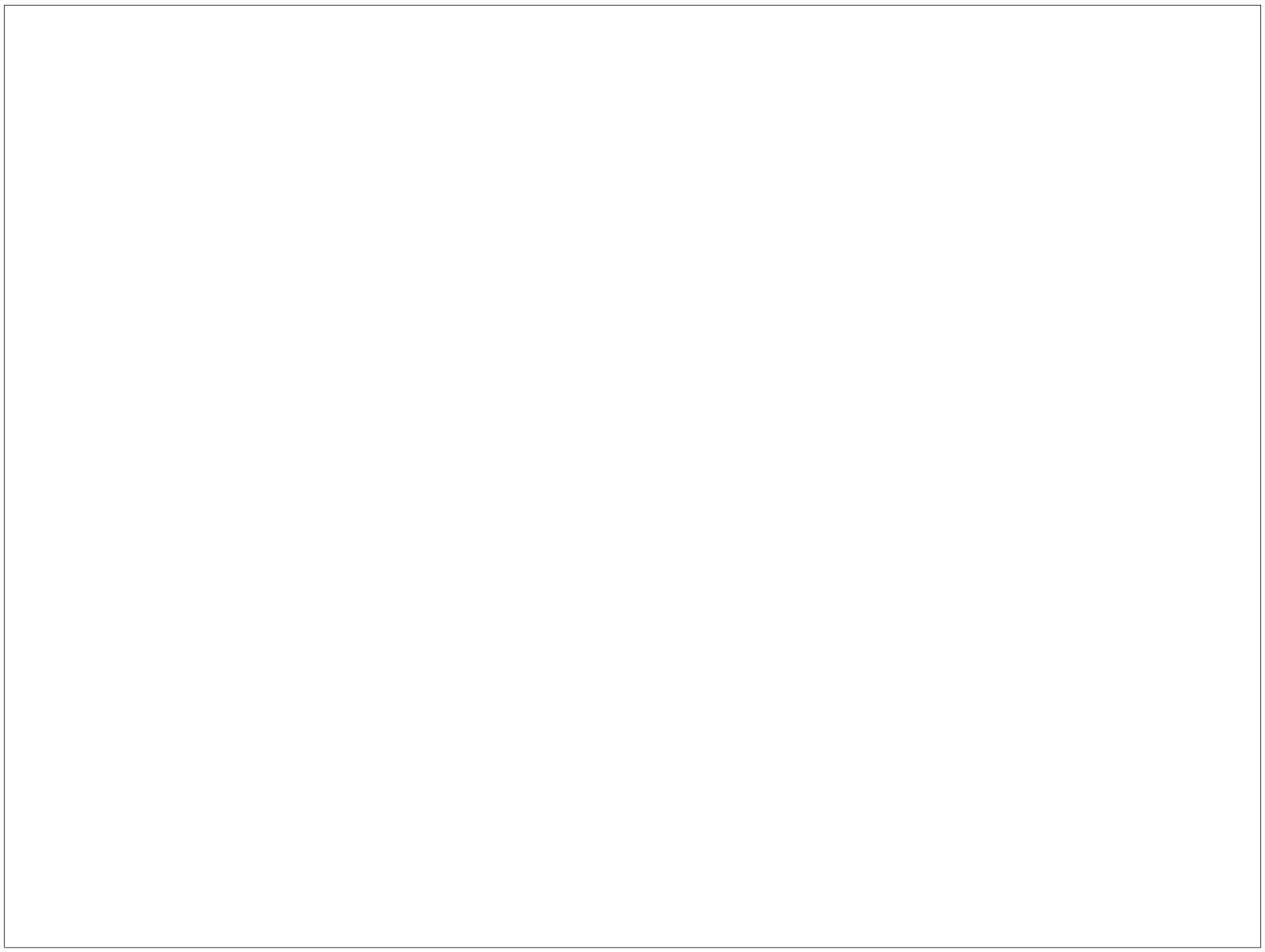


The approach to the port is free and clear. Extensive anchorage is available in the open roadstead just south of the port in depths of 9.1 to 18.3 meters. The bottom of the anchorage area is rock and sand, which normally provides good holding ground. Ships in the harbor are exposed from the southwest and are subject to strong gale-force winds and heavy seas, especially during the May to August monsoon season. Holding becomes difficult and even large vessels have been known to drag their anchor.

Mogadishu port has three covered storage buildings with a total floorspace of 18,000 square meters. The old harbor has eight considerably smaller buildings with a total floorspace of 13,000 square meters. Open storage space is more than sufficient at the port.

Mogadishu has no quayside or floating cranes. There are seven mobile cranes, the largest of which has a 50-ton capacity.

The port is cleared by three hard-surfaced roads, two leading to the interior and one leading to the southern port city of Chisimayu. Mogadishu has no rail clearance.

Chisimayu port is located on the Indian Ocean. Approach is free and clear, although movement in and out of the port is restricted to daylight hours. Chisimayu has an estimated military port capacity of 2,500 tons per day.

The port has a roadstead outer harbor and a breakwater-protected inner harbor with an entrance depth of 8.5 meters. Pilotage is compulsory. Although silting is a problem, little dredging has been done in recent years.

Extensive anchorage in depths of 10 meters over good holding ground is available southeast of the entrance channel. Anchorage is also permitted within the harbor in depths of 8.5 meters.

There are three covered storage buildings at Chisimayu with a total floorspace of 8,200 square meters. Open stacking is limited to the L-shaped mole. The port has six portal cranes for offloading and two berthing tugs. Lighterage can be performed with four 300-ton capacity pontoons. Chisimayu has a limited ship repair capability.

The port is cleared by a hard-surfaced two-lane road that leads to Mogadishu. There is no rail clearance.

Patterns of Access. The Soviet Union built the port at Berbera and maintained a naval base there until expelled by Mogadishu in 1977. The port was part of a larger military complex that included a major airfield, missile handling facility, and communications complex. Soviet warships have not called at Berbera during the past eight years.

The United States, which signed a military access agreement with Somalia in 1980, recently completed a $37.5 million project to improve both the port and airfield facilities at Berbera. The port construction included a deepening of the harbor, a ramp for Ro-Ro vessels, a new causeway, new navigational aids, quay extension, and new lighting. Washington plans to preposition supplies in Berbera to support US Central Command operations in the region.

Berbera is used by other countries for commercial activity and some, such as Egypt and China, have made arms deliveries at the port. The Indian Navy made a port call in early 1985.

Mogadishu was used by the Soviets for arms deliveries and occasional naval port calls. Several US Navy vessels have visited the port since 1980.

The Soviets appeared to be in the process of establishing several facilities for their use at Chisimayu prior to their expulsion, including a building possibly intended for servicing naval missiles. Little development has occurred at Chisimayu since 1977, although a new $42 million port rehabilitation project, funded by USAID and supervised by the US Navy, will begin later this year. 25X1 25X1

Activity. The port of Berbera is primarily a commercial facility. Thousands of cattle, sheep, goats, and camels are shipped from the port to Egypt and other consumers in the Middle East. Almost all imports through Berbera are intended only for northern Somalia. 25X1 25X1

Mogadishu is a center for the export of bananas, sugarcane, charcoal, meats, tanned hides, and skins. Principal imports include machinery, cement, transport equipment, and consumer goods. Military equipment intended for the capital or units in central Somalia enters through Mogadishu. 25X1 25X1

Chisimayu is used almost exclusively as a commercial port since none of the naval craft there are operational. Livestock, bananas, and sugarcane are the principal exports that pass through it. Because of its isolation, military deliveries occasionally are made to Chisimayu. 25X1 25X1 25X1

Fuel Storage. With the completion of US construction projects, Berbera now has a storage capacity of approximately 135,000 barrels. A petroleum refinery with a capacity of 3.6 million barrels per year is located at Mogadishu, and the city also has storage facilities for 700,000 barrels of refined products. The port of Chisimayu has a storage capacity of 230,000 barrels. 25X1

Defenses. Somali military units are stationed at all three ports. Berbera is a major Somali naval base, although maintenance and the lack of space parts have left its two Osa missile attack boats inoperable. The Somali Air Force occasionally stations MIG-19s and MIG-17s at the airfield, and the SA-2 surface-to-air missiles employed at Berbera add to air defense 25X1 25X1

25X1

25X1

capabilities. Age, poor maintenance, and a shortage of space parts, however, significantly reduce the effectiveness of these systems.

Mogadishu is defended by several elite Army units stationed in or near its environs. In addition, SA-2 and SA-3 missile systems provide air defense for the capital, and MIG aircraft can be deployed to Mogadishu Airfield.

Chisimayu has several Somali Army units stationed near the port to provide security against any ground threat. The port is also a major naval base, but none of the craft stationed there is operational.

Berbera Airfield (10°23′ N. 44°57′ E.,

25X1

25X1

Hargeysa International Airfield (09°31′ N. 44°05′ E.,

25X1

Mogadishu International Airport (02°00′ N. 45°18′ E.

25X1

25X1

There are several jet-capable airfields in Somalia but only Berbera, Hargeysa, and Mogadishu have the location and facilities to support military operations in the Red Sea–Indian Ocean region. Berbera Airfield

25X1

has one of the longest runways in the area—necessitated by the extremely hot climate. The runway and some support facilities were completed by the Soviet Union prior to its expulsion from Somalia in 1977. Hargeysa is a combined civilian-military airfield, handling domestic as well as international flights. Mogadishu International is the country's principal civilian airport, although the Somali Air Force uses it on occasion and performs some maintenance there.

Description. Berbera Airfield has a 4,115 by 46 meter asphalt runway that has recently been resurfaced. It is capable of handling C-130, C-141, and C-5 transport aircraft. Berbera has adequate POL and munitions storage facilities and is located near the port. The airfield is used occasionally by Somali Air Force MIG fighters, although no aircraft are permanently stationed there.

The taxiway/parking ramp at the US military ramp on the northeastern side of the runway has standard blue lighting. The runway itself has operational standard lighting but it operates on request only. A four-wheel drive tow tractor capable of moving a C-141 is available but tow bars may be hard to obtain.

The airfield has VFR, NDB, ILS, TACAN, and a control tower, although the tower and NDB operate only on request or for scheduled flights

Berbera is cleared by a two-lane all-weather highway to the interior and the port, although no rail facilities are available.

Hargeysa Airfield has a 2,280- by 46-meter asphalt runway, capable of handling C-130 and C-141 transports. There is a hard compacted dirt extension at the end of the main runway that also can be used by C-130 aircraft. The C-141, however, can only operate at reduced weight. Hargeysa has one of the best runways in Somalia—despite lacking an operational center line, runway edge, taxiway, or apron lights—and is a major military airbase for MIG-17s, MIG-19s, and Somali Air Force transport aircraft.

There is an aluminum hangar—used only by the Somali Air Force—located at the west end of the parking apron that is large enough to accommodate MIG-sized aircraft. 25X1

Hargeysa is a daytime-only airfield since it has no IFR capability. It has a VFR, control tower, and NDB. is not 25X1
operational because power in the city and at the airfield is turned off during daylight hours and no 25X1
aircraft utilize Hargeysa at night. The Somali Air Force has at least one external power cart at the airport. 25X1

Hargeysa is cleared by a two-lane all-weather road. There is an asphalt road to the city of Hargeysa, approximately 5 kilometers away, but it is in poor condition. 25X1

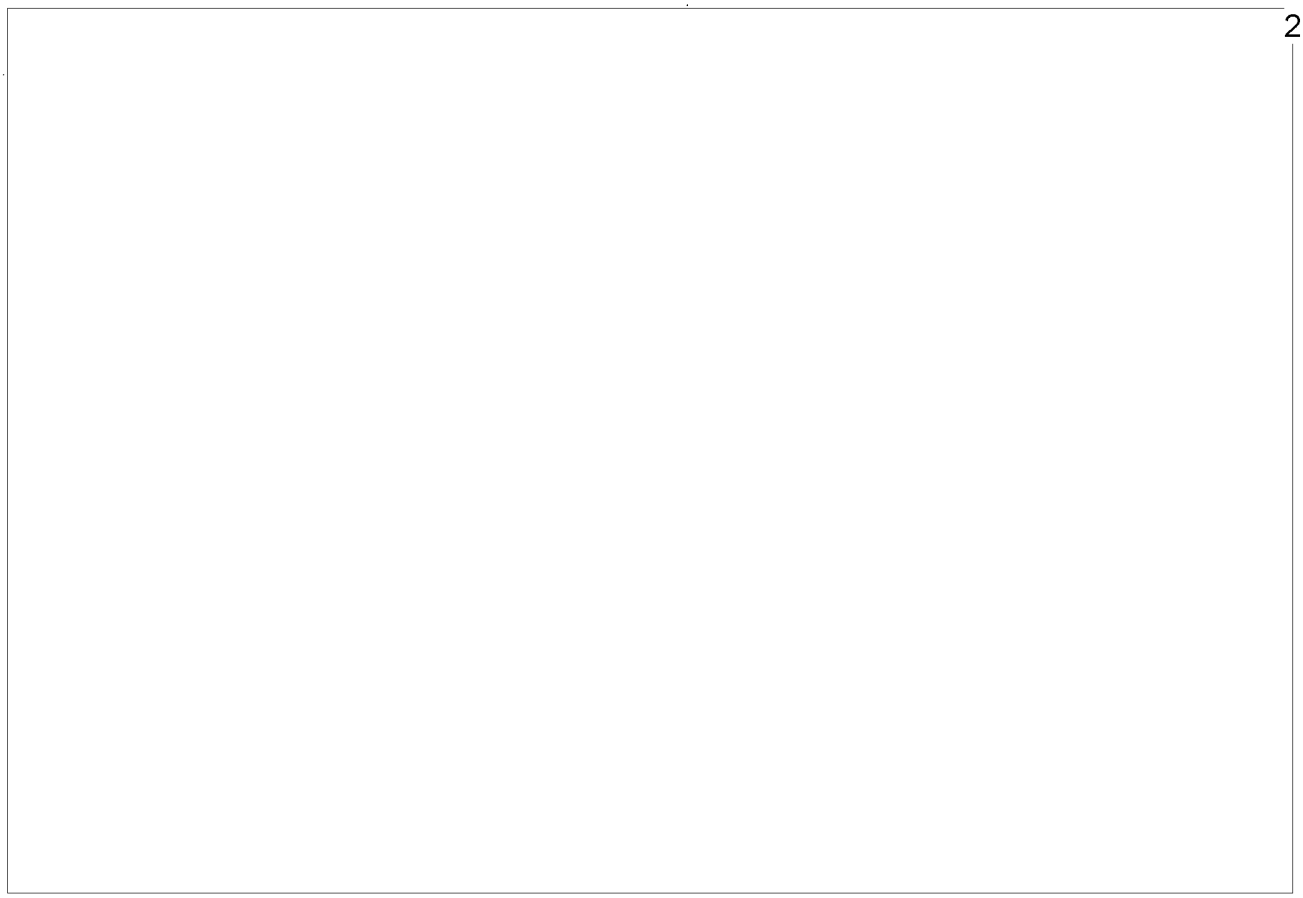
25X1

Mogadishu International Airfield, 25X1
does not meet international standards of safety or services. Many services taken for granted elsewhere—such as navigational aids, lighting, instrument approaches—are substandard or non-working. Various US-funded military construction projects are under way, however, to address several of these problems and should be completed by the end of October. 25X1

Mogadishu has a 3,150- by 45-meter asphalt runway and can handle C-130, C-141, and C-5 transport. It has six asphalt and concrete parking aprons that are too small to accommodate the C-5. An extensive expansion of the parking apron on the Somali Air Force side of the airport is well under way. The airfield is the headquarters of Somali Airline and has adequate maintenance and support facilities. 25X1

Mogadishu has an IFR, VFR capability, control tower, approach control, VOR/DME, NDB, and GCA radar, but these services are poorly manned or maintained. The control tower, for example, is rarely used because it has very limited control equipment.

25X1



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Aircraft are directed in from the flight information center—which has no windows—located in the terminal. A contract has been awarded to replace the runway and taxiway lights, and to install a precision approach path indicator (PAPI) landing system.

Mogadishu Airfield is cleared by an all-weather road that leads to the capital. It is in generally poor shape and suffers from a lack of maintenance.

Fuel Storage. Berbera Airfield has a storage capacity of approximately 3,800 barrels of A-1 jet fuel. Two 25,000-barrel tanks are located at the airport itself. Fuel is dispersed by truck and a recently completed dual hydrant system. Fuel capacity at Hargeysa is estimated to be 1,090 barrels of A-1 jet fuel with refueling conducted primarily by truck. Mogadishu airport has approximately 1,140 barrels of A-1 jet fuel storage capacity. Refueling is done by tanker truck.

Somalia suffers from a chronic shortage of fuel for air operations, however, and its Air Force is frequently down. We doubt that the airfields could support sustained air operations without some arrangements being made for the provision of additional fuel.

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25X1

Activity. Berbera was built by the Soviet Union and was intended primarily to support IL-38 and TU-95 naval reconnaissance missions over the Indian Ocean. The Soviet military presence in Somalia was terminated, however, before Moscow could use the airfield.

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The United States agreed to rehabilitate Berbera in return for Somalia's granting access rights to air and naval facilities. At the airfield, the project included

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resurfacing the runway, installing lighting, and upgrading various other services. Berbera is used by the United States to support yearly Bright Star exercise operations. 25X1

Hargeysa was used frequently by the Soviet Union for IL-38 naval reconnaissance flights over the Indian Ocean. It is now occasionally used by US Navy P-3 naval reconnaissance aircraft. 25X1

Mogadishu has a relatively light load of commercial air traffic, often only two flights a day, and it rarely handles night traffic. Somali Air Force aircraft are occasionally flown to Mogadishu for maintenance and training purposes. 25X1

The United States uses the airfield for Embassy support flights or other special missions. Like Berbera, it is also utilized during the Bright Star exercises. 25X1

Defenses. Berbera is defended by several Somali Army units stationed in the vicinity. The Berbera area has an SA-2 surface-to-air missile system as well as air defense guns. The SAMs are of questionable value because of maintenance problems and age, although the battery did launch a missile at a misidentified US Navy fighter in 1983. Security at the airfield is sufficient to deter any large attack but Somali forces would have difficulty preventing small unit infiltration. Berbera Airfield was bombed by Ethiopia on one occasion during the 1977-78 Ogaden war. 25X1

Hargeysa is also located in close proximity to Somali Army and Air Force units. It is defended by an SA-2 SAM battalion, which probably has a low operational capability. Army units are sufficient to defend the base against large-scale attacks but would have difficulty deterring small groups of infiltrators. Somali Air Force MIGs stationed at the base could provide limited ground support assistance but would be unable to defend against an air attack because of low pilot proficiency, poor communications, and inadequate warning time. 25X1

Kenya

Overview

We believe, on the basis of US Embassy reporting, that the primary internal threat to President Moi's moderate, pro-Western government comes from tribal rivalries that are fueled by growing economic and social problems. Tribal discontent played a key role in an unsuccessful coup attempt by disaffected Air Force elements in August 1982.

25X1

Reporting from the US Embassy indicates that the country's economy has been declining in recent years as a result of decreased foreign investment, inflation, oil imports, and rapid population growth. Agricultural production has also been more difficult because of poor weather, the reduced availability of fertile farm land because of overpopulation, and poor soil conservation practices. Rural problems have generated a flight of unskilled workers from the countryside to the cities, creating social strains and demands for improved services.

Moi has reacted to internal dissent by building a political coalition of western minority tribes, increasing his personal power, and becoming more repressive. The US Embassy states that these actions have eroded his support among major tribal groups such as the Kikuyu and Luo. The President has managed, however, to keep his opponents divided and has taken measures to ensure the loyalty of the Army, weakening any serious threat to his regime at this time.

25X1

Kenya has maintained close ties to the West, particularly Great Britain and the United States, since achieving independence in 1963. Nairobi participates in limited and unpublicized military exercises with the United Kingdom and United States, and the British have a small advisory team in Kenya. The United States and Kenya signed an access agreement in June 1980, which allows Washington to use Kenyan port and air facilities to support operations in the Indian Ocean–Persian Gulf region. The agreement was renewed for an additional five years in June 1985.

Mombasa Port (04°02′ S. 39°38′ E.)

Mombasa is the largest and probably the best-equipped port on Africa's east coast. Located on Kenya's Indian Ocean coast, Mombasa is the country's only deepwater port, terminus of Kenya Railway's main line, and the primary import-export center for landlocked Uganda and Rwanda.

25X1

Description. The approach to the port is well protected and consists of two main inlets separated by Mombasa Island. The port is virtually free of silting, and the entrance to the south channel has been dredged to a depth of 14 meters. There are 17 deepwater alongside berths at Mombasa's Kilindini Harbor, three of which are used for container and Ro-Ro ships. In addition, there are two coaster alongside berths, 17 lighter berths, two POL berths, and two Navy berths. There are also eight mooring berths in the harbor for lighter operations.

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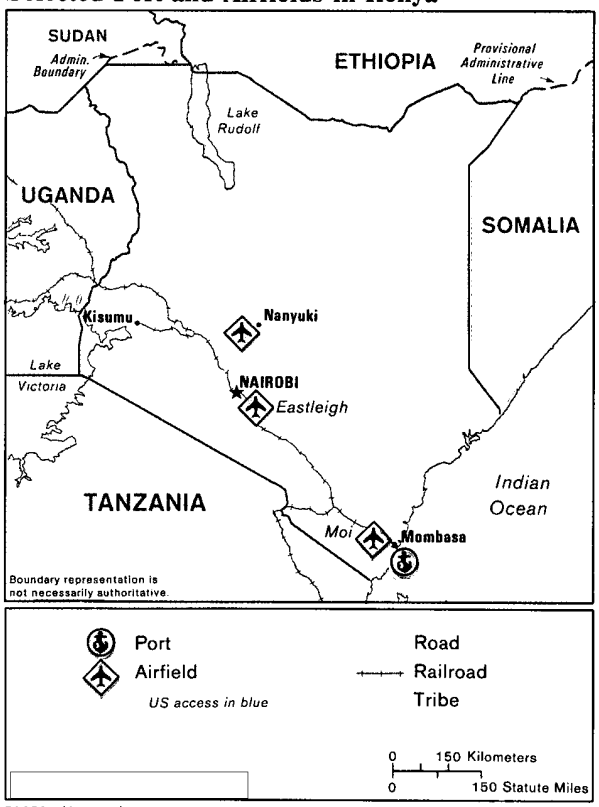
Figure 26
Selected Port and Airfields in Kenya



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Mombasa has more than 30 covered storage buildings with a total floorspace of more than 200,000 square meters. Open storage, however, is limited to 42,000 square meters.

The deepwater berths at the port are served by 72 quayside portal jib cranes, three of which have a 40-ton capacity, and the remainder have capacities ranging from 2 to 7 tons. In addition, there are approximately 18 mobile cranes with capacities from 11 to 32 tons, three 40-ton container cranes, and one 60-ton floating crane.

Mombasa is cleared by one single-track, 1-meter-gauge rail line to Nairobi that eventually links up to the Ugandan and Tanzanian systems. It is also cleared by three all-weather highways that lead to the interior of Kenya.

Maintenance facilities are available, including a well-equipped 20,000-ton drydock, the largest on the East African coast. In addition, there are five marine railways capable of medium-hull and engine repair to vessels up to 2,500 tons.

Patterns of Access. In 1980, Kenya signed an agreement with Washington permitting, among other things, US Naval access to Mombasa and the prepositioning of material intended to support Indian Ocean operations. The US Navy uses the port for rest and recreation and to replenish its ships. The United Kingdom also has an agreement with Kenya granting British Naval access rights. Both countries have conducted limited naval exercises with the Kenyan Navy.

Soviet Naval units have not visited Mombasa for over 10 years. Approximately 45 Soviet commercial ships call at the port each year, however, and Soviet trawler visits usually coincide with US Navy port visits.

Activity. Mombasa has a military port capacity of 15,100 metric tons. It is the headquarters and operating base of the Kenyan Navy, which consists primarily of British-made patrol craft. Principal imports are crude petroleum, fertilizer, iron and steel products, machinery, and transport equipment. Exports include cement, soda ash, fluorspan, agricultural and forest products, and refined petroleum products. Total cargo moved in 1980, the last date for which information is available, amounted to 7.4 million metric tons, 73 percent of which were imports. 25X1 25X1

Fuel Storage. There are 2.2 million barrels of crude and 4.7 million barrels of refined storage available, with the greater portion of this stored at the Mombasa refinery. Fuel oil and diesel bunkering oil is available at most deepwater quays and at two tanker berths. Fuel is also furnished by four bunkering barges, with a capacity of 1,100 barrels each. Hose sizes on each barge are 38.4 and 63.8 mm. 25X1 25X1

Defenses. There are no known military defenses around the port area. Mobassa Airfield, however, is 10 kilometers west of the port and has military forces available. Some security for the port area is provided by Kenyan police forces, however. 25X1 25X1

Nanyuki Airfield (00°01′ N. 37°01′ E., 25X1

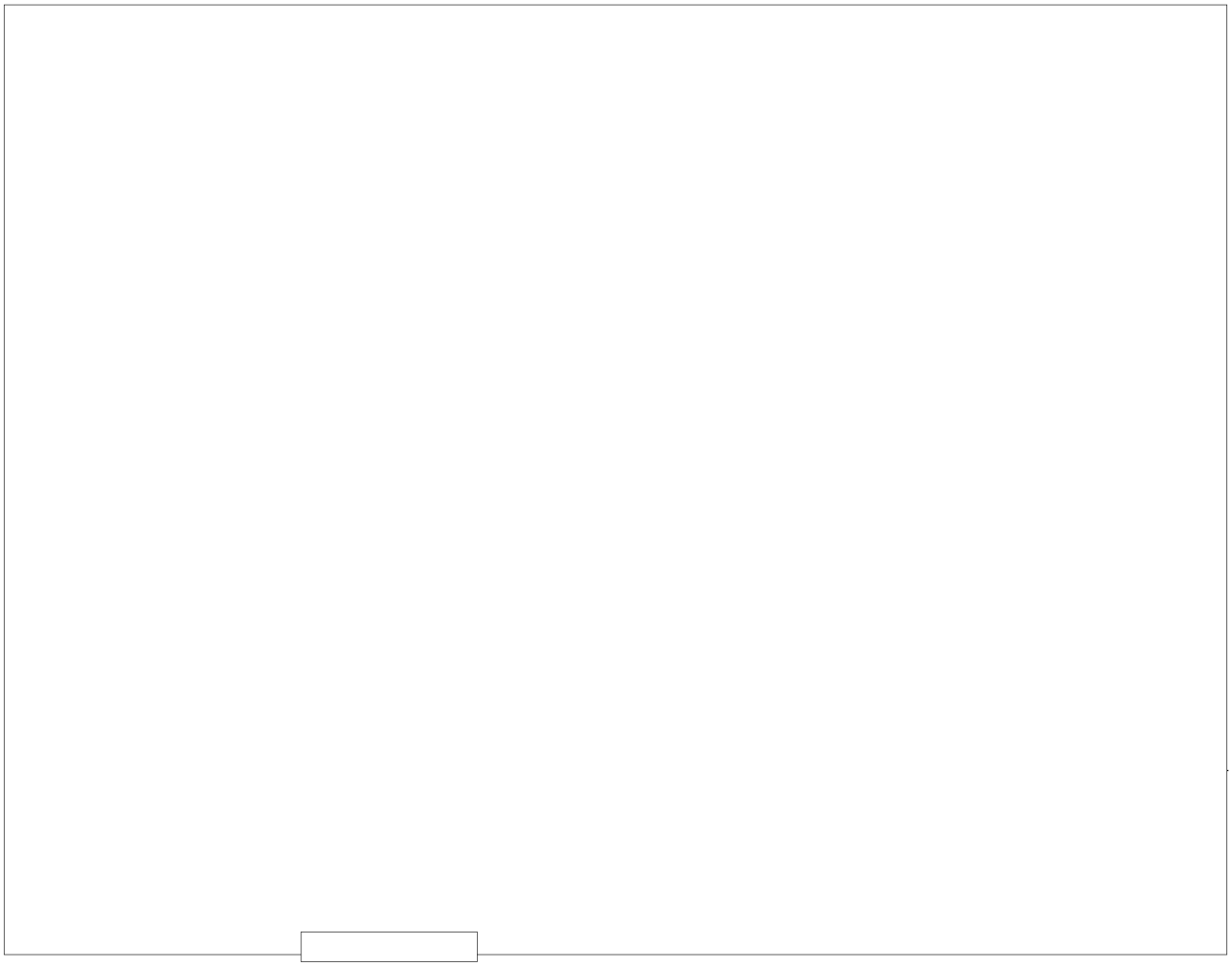
25X1

Nairobi/Eastleigh Airfield (01°16′ N. 36°51′ E., 25X1

Moi International Airfield (04°01′ S. 39°35′ E., 25X1

Nanyuki Airfield is an important fighter base where F-5s, BAC Strikemasters, and Hawk aircraft are deployed. Eastleigh Airfield houses the Air Force's transport, air support, and helicopter squadrons. It is also the location of the Kenyan Air Force headquarters, supply and maintenance facilities, and the basic training wing. Moi International Airfield is a civilian facility that services the port of Mombasa. 25X1 25X1

Description. Nanyuki Airfield is capable of handling C-131 aircraft. It has a 4,023 by 30-meter asphalt runway and several small parking aprons. It has a control tower and IFR, VFR, ASR, ILS, and NDB capabilities. Nanyuki is serviced by a two-lane bituminous road to the city of Nanyuki. 25X1 25X1



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Eastleigh has a primary asphalt runway of 2,438 by 46 meters and is capable of handling C-130 aircraft. The airfield has a control tower, IFR, VFR, NDB approach control, and radar capabilities. It is serviced by an all-weather highway to Nairobi and a single-track rail line located 1 mile north of the airfield.

Moi International has a primary asphalt runway of 3,350 by 45 meters and can handle C-5 transports. It possesses a control tower, IFR, VFR, VOR, NDB, radar, and ILS capabilities. Clearance is excellent with an all-weather road to Mombasa, a rail line 3 kilometers north of the airfield, and the port situated approximately 10 kilometers to the east.

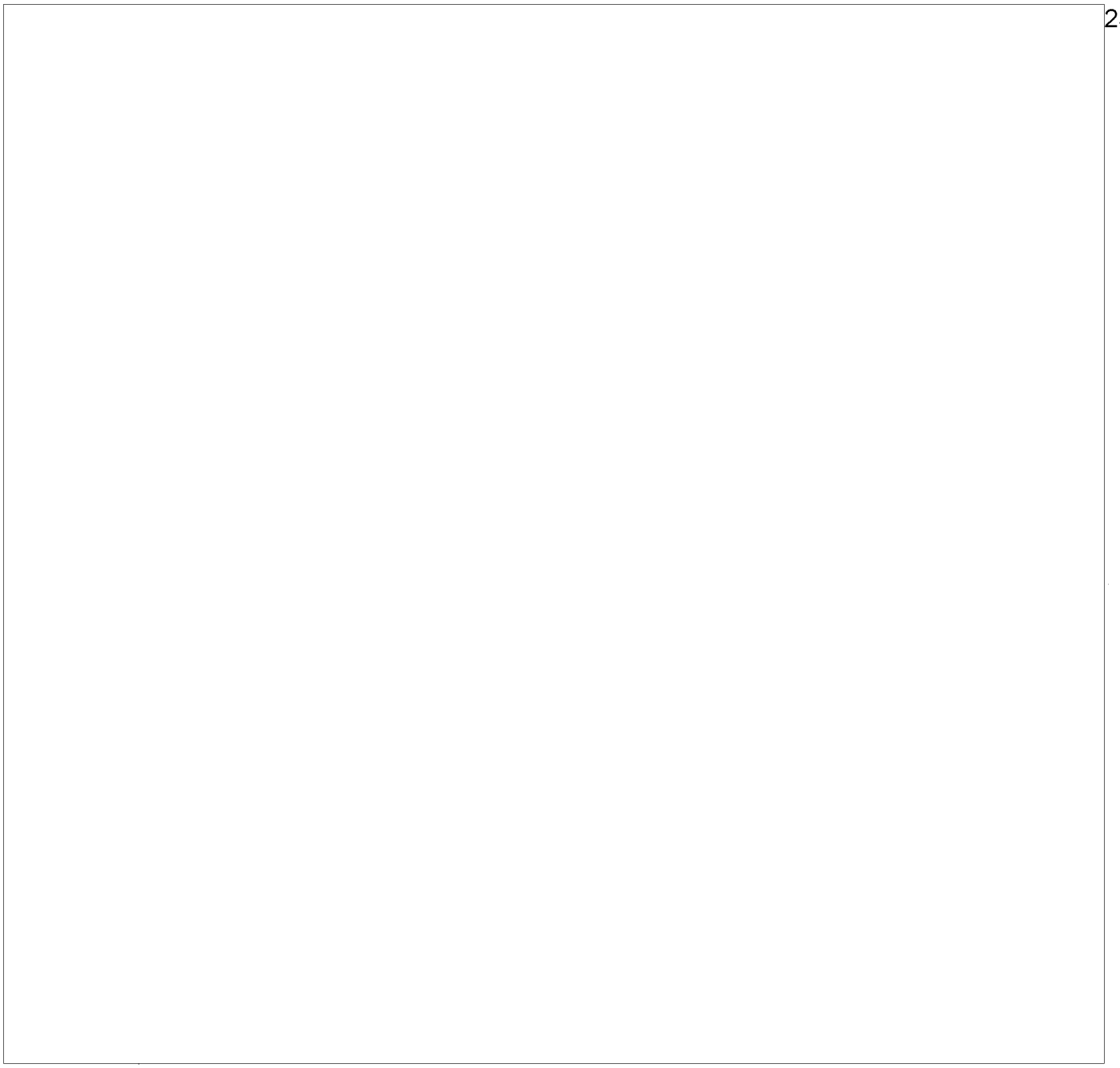
Fuel Storage. Nanyuki has a storage capacity of about 645 barrels of A-1 jet fuel. Both hydrants and tanker trucks are used for disbursement.

Eastleigh has a 1,965-barrel A-1 jet fuel storage capacity, and fuel is dispersed by hydrant. 25X1

25X1

Moi International has a total capacity for all fuels, including A-1 jet fuel, of 7,145 barrels. Both hydrants and tanker trucks are used to transfer fuel. 25X1

25X1



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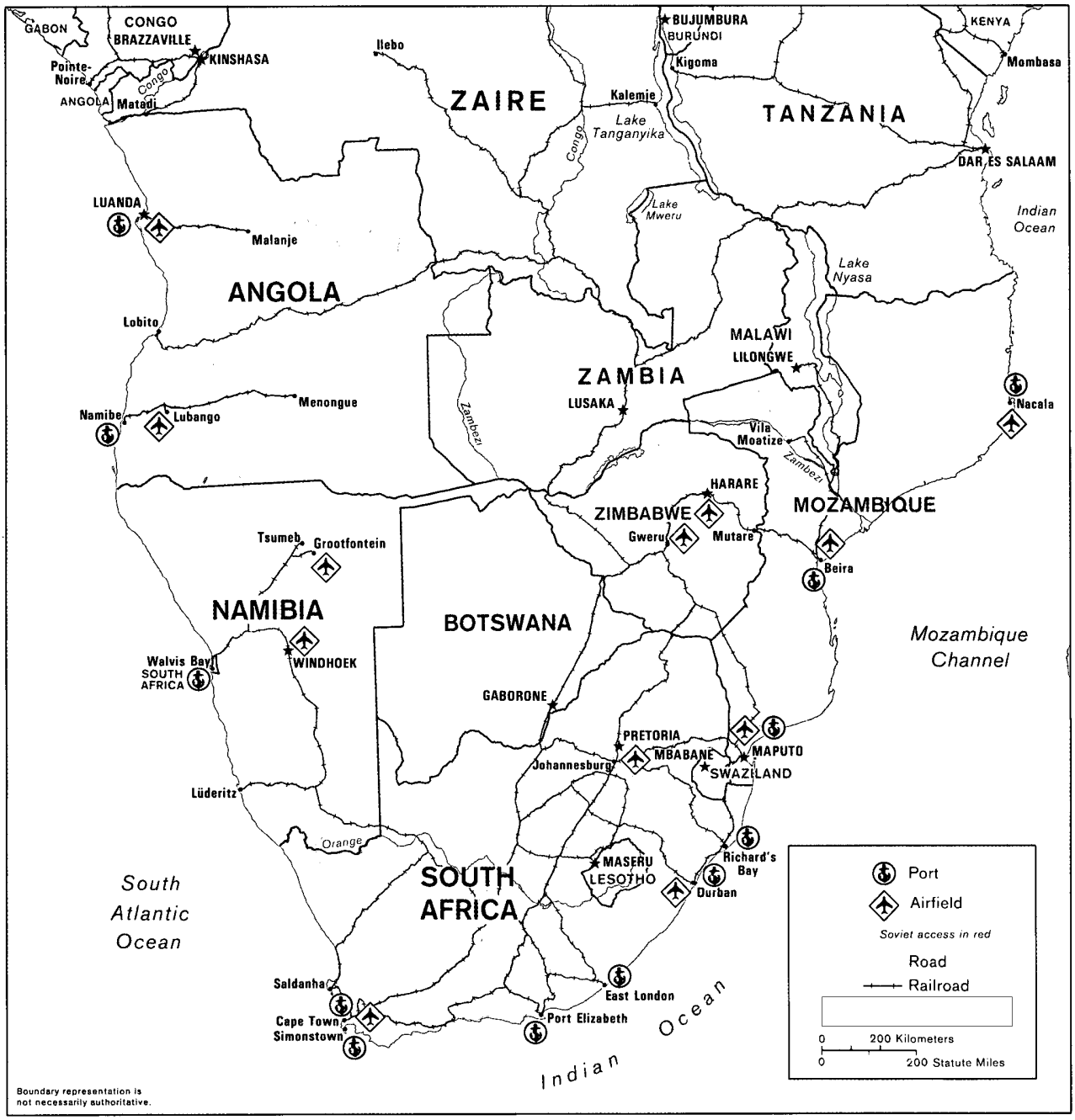
Defenses. Nanyuki and Eastleigh are major airbases protected by Kenyan Army units that are located in proximity to both airfields. Moi International Airfield is protected by approximately 40 Kenyan police officers. In addition, elite paramilitary police commandos, as well as Army forces, are located at a nearby base.

25X1

Southern Africa

Figure 31
Selected Ports and Airfields in Southern Africa



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Southern African Ports and Airfields

Mozambique

Overview

After 11 years of independence, President Machel's self-proclaimed Marxist regime is struggling to survive the combined effects of a countrywide insurgency, faltering economy, and recurrent drought. Machel enjoys a strong power base in the military and party and remains the most popular political figure in the country. Although he has turned to the West for economic aid, Mozambique remains militarily dependent on the Soviet Bloc. Since 1975 the USSR and its allies have provided approximately $1 billion in military aid to Maputo and currently keep about 800 military advisers and technicians in Mozambique.

25X1

Antigovernment guerrillas—the Mozambique National Resistance (RENAMO) numbering about 15,000—expanded their activity to all the provinces of Mozambique in 1984. The insurgents, who describe themselves as pro-Western, are basically an anti-Machel movement with an undeveloped program for reform. Negotiations between the government and the insurgents broke down in late 1984, and both sides appear to have opted for a military solution to the war.

25X1

Mozambique's once relatively prosperous economy now is characterized by almost continuous decline, with GDP falling by 20 percent in 1985. Government efforts at collectivization and nationalization from 1975 to 1983 and insurgent attacks on farms and transport facilities have ruined the once prosperous agricultural sector and contributed to the economic decline. Maputo admitted last year that 5 million of the country's 14 million people were affected by food shortages caused by drought, insurgency, and government mismanagement.

25X1

Maputo Port (25°28′ S. 32°34′ E.,

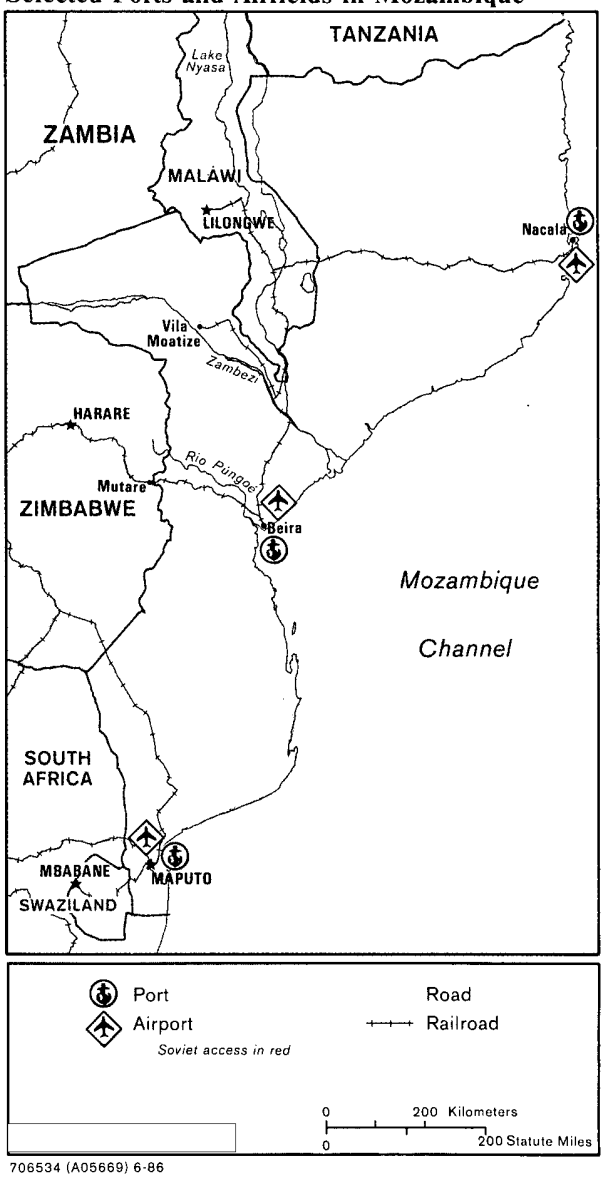
25X1

Beira Port (19°50′ S. 34°52′ E.,

25X1

25X1

Figure 32
Selected Ports and Airfields in Mozambique



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Nacala Port (14°33′ S. 40°00′ E.) Three deepwater ports, evenly spaced along Mozambique's 2,970 kilometers of coastline, offer direct access to the Indian Ocean for the landlocked countries of southern Africa and for South Africa's industrialized Transvaal Province. The ports are important to the region's black-ruled states that hope to reduce transportation dependence on South Africa. The USSR has naval access to all three seaports. Poor maintenance and insurgent attacks on connecting railways and roads have reduced port usage to a small fraction of capacity.

25X1

Description. Maputo is the largest port in Mozambique, with the capacity to unload and clear from wharves approximately 14,000 metric tons of military cargo in a 24-hour period (military port capacity). It is located in a well-protected natural harbor with a water area of about 21 square kilometers. Approach is unobstructed through the northern channel, which is at least 11.4 meters deep, but the southern channel was closed to most ships as of August 1984.

Maputo's general cargo area is located at the mouth of the Estuario do Espirito Santo. As of 1985, the general and bulk cargo docks included 2,225 meters of wharf with berths at least 10 meters deep for 12 large oceangoing vessels and one small coastal vessel. Equipment on the wharf included one coal loader, a cold storage building, and 29 storage buildings totaling more than 70,000 square meters of covered storage. Two more berths reserved for naval ships total 180 meters in length by 6.7 meters in depth and could accommodate a destroyer escort and minesweeper. A 4,500-ton capacity floating drydock was delivered to Maputo by the USSR in 1981.

25X1
25X1

Dockside, cargo-handling equipment consists of 82 electrical cranes, 27 tractors, 158 forklifts, 13 wheel-loaders, and eight compressors

25X1

There also were two new pilot boats—all port pilots

25X1

25X1

25X1

have been Soviet officers since early 1982—and two tugs, all in working order. The port has a modern container facility with a 200-meter container berth, two container cranes, and a 1,000-TEU container storage yard.

Ore and petroleum facilities are located 8 kilometers upstream at Matola. In 1985, the single ore cargo berth was 360 meters long by 12 meters deep and had two ore loaders. Three tanker berths were each 230 meters long by 10 meters deep. One of the berths had three hoses; equipment at the other is unknown.

Maputo port is connected by narrow-gauge rail lines and by roads to South Africa, Zimbabwe, and Swaziland. Overland travel throughout Mozambique is interrupted frequently by equipment breakdowns and attacks by RENAMO insurgents.

25X1

25X1

Beira is Mozambique's second-largest city and port. It had an estimated military port capacity of 7,500 metric tons per day in 1984. Located in the mouth of

25X1

the Rio Pungoe, the port is approached through an 11-kilometer long channel with an entrance width of 200 meters and a depth of at least 5.7 meters. Silt deposits are a major problem, and the channel must be dredged frequently. The outer harbor offers sheltered anchorages up to 7.6 meters deep over firm holding ground, while the inner harbor accommodates up to six small ships at two mooring buoys with depths of at least 3.4 meters.

Beira port in 1985 contained 1,560 meters of general cargo berthing, one 166-meter POL bresting wharf, and two new quays under construction that will offer another 280 meters of berthing. Containers, ores, and bulk cargo are handled along the main cargo wharf. A drydock 115 meters long, 17 meters wide, and 8.5 meters tall accommodated ships up to 5,000 tons dead-weight.

in early 1985 reported that dock equipment at Beira also was poorly maintained. Equipment consisted of 52 portal jib cranes, two floating cranes, and one mobile crane, although this equipment reportedly was in poor condition in early 1985. Covered storage is provided by 17 transit sheds adjacent to the berthing area, with a total of over 31,500 square meters of space. There also is about 31 hectares of open storage. A narrow-gauge railway and paved roads connect the port to Malawi, Zimbabwe, Zambia, and Botswana.

Beira has a small container capability, but not a modern facility. There are no container cranes. The only dedicated container storage area is apparently for empty storage only.

Nacala is Mozambique's third-ranking port and probably the best natural harbor in east Africa. Small and compact, it has an estimated military port capacity of 4,000 metric tons per day. The large harbor has depths varying from 20 to more than 60 meters and offers good anchorage for ships of any size. The entrance channel from the north is about 1 kilometer wide and at least 20 meters deep.

Nacala contains one 633-meter general cargo wharf, and one newer 352-meter container/Ro-Ro quay. The modern container facility has the capability to store and transship roughly 1,000 TEU. The facility is not, however, equipped with modern container cranes. The port has a total of 985 meters of berthing length. Cargo-handling equipment in August 1985 included 20 electric cranes, several smaller mobile cranes, forklifts, and a 25-ton rail-mounted gantry crane. Reportedly, at least 20 percent of the cranes are always out of order. Approximately 18,600 square meters of covered storage is available adjacent to the port in eight transit sheds.

Nacala is connected by a narrow-gauge rail line and paved roads to Malawi, and press accounts say that 90 percent of the container traffic handled at the port is Malawi's.

Patterns of Access. Soviet naval and commercial ships have called regularly at all three ports since Mozambique and the USSR signed a Treaty of Friendship and Cooperation in March 1977. Soviet warships transiting the Cape route around Africa often stop in Mozambique, as do Cuban troop ships sailing between Angola and Ethiopia. Soviet arms carriers have delivered MIG-21 fighters to Nacala, MIG-17s to Beira, HIND-D helicopters to Maputo, and a wide variety of other military equipment. Arms destined for other Soviet clients in southern Africa have been shipped to Beira, and moved onward by rail. Other frequent visitors include Soviet fishing vessels that operate in Mozambican waters and Soviet research ships doing extensive hydrographic studies of the Mozambique Channel.

Commercial vessels from the West frequently call in Mozambique, but naval visits are rare. Military aid from the West remains limited and rarely involves arms deliveries.

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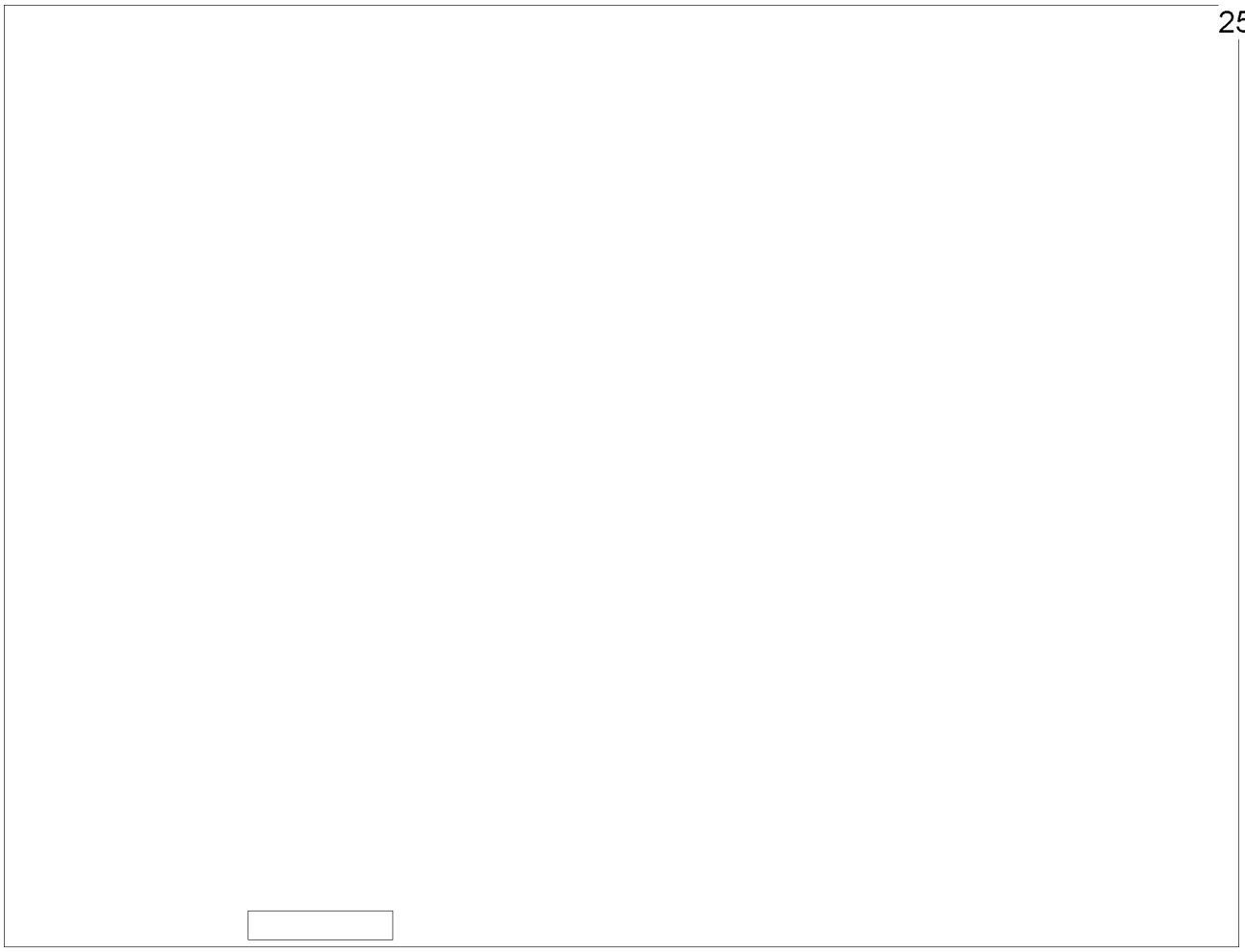

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Activity. Maputo was the busiest port on the East African coast until Mozambican independence in 1975, when South Africa rerouted its trade to avoid the new, black-ruled, Marxist state. Although South Africa has resumed using Maputo, insurgent activity and continuing port deterioration have reduced port usage steadily in recent years. Having accommodated more than 13 million tons of cargo in 1973, Maputo handled only 6.6 million tons in 1981, 5.6 million tons in 1982, 4.1 million tons in 1983, and 3.3 million tons in 1984.

Beira is the terminus of international railways and roads and of a pipeline carrying petroleum to Mutare, Zimbabwe. The insurgents have closed the railway to Malawi, however, and frequently ambush travelers on Mozambique's roads. Port usage was at least 3 million tons annually before independence, but dropped to approximately 1.6 million tons each year from 1981 through 1983. It appears to have diminished to only 600,000 tons of cargo handled during the first six months of 1984. In early 1985, the port was handling Ro-Ro ships and about 400 containers every 19 days.

25X1

Insurgent activity and gross inefficiency have greatly reduced port operations and almost closed Nacala's rail and road links to Malawi and northern Mozambique. The Mozambican press reports that the port could accommodate 2 million tons of cargo annually,

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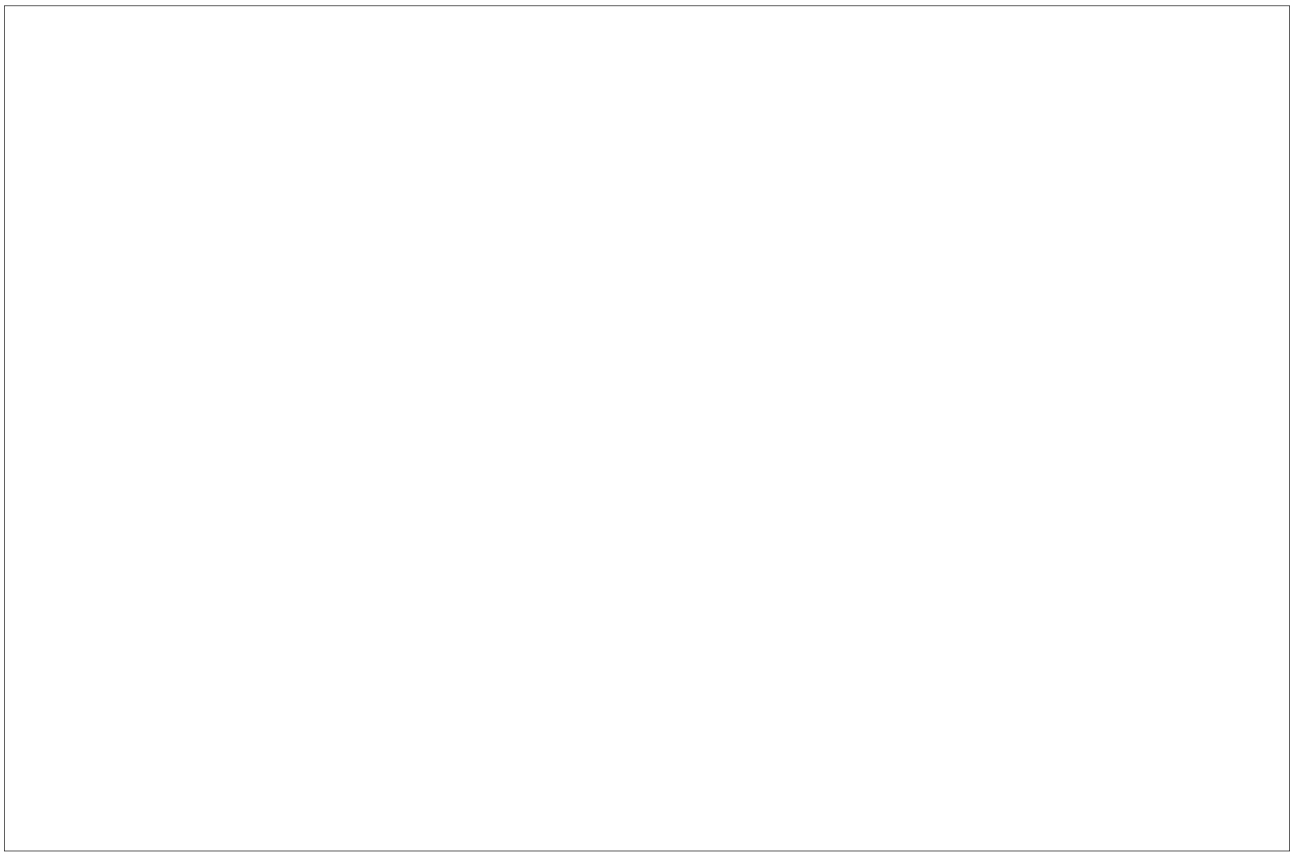

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but handled only about 780,000 tons each year in 1979 and 1980. the port was theoretically capable of handling approximately 300 containers per month, but it had about 1,500 containers backed up.

Fuel Storage. Estimated storage capacity for refined products in 1979 was 1.7 million barrels at Maputo (another 830,000 barrels of crude oil can be stored, mostly at the refinery) and 1.4 million barrels at Nacala. A covert raid at Beira in December 1982 destroyed approximately half of the oil storage tanks there, reducing storage capacity to about 730,000 barrels.

Defenses. Soviet warships occasionally call at Mozambique's ports, but no Soviet combat ships are assigned there. Many of the approximately 800 Soviet, 800 Cuban, and 500 East European military advisers in Mozambique are stationed near the port cities.

The Mozambican Navy has about 10 patrol boats and uses all three ports. Mozambique's Air Force has about 35 MIG-21 interceptors based at Nacala; a similar number of MIG-17 fighter-bombers, usually at Beira; and 15 HIND-D helicopter gunships at Maputo. SA-3 sites are deployed around the capital city, and antiaircraft artillery sites are near the airfield. Newly delivered SA-2 missiles were being installed north of Maputo in early 1986. Ground forces garrisoned near the ports include the 6th Tank Brigade and 1st Mechanized Infantry Brigade near Maputo at Matola and Boane, at least one infantry battalion and headquarters elements of the 5th Motorized Infantry Brigade in Beira, and an airborne training base at Nacala.

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Maputo Airport (25°55′ S. 32°34′ E.,

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Beira Airport (19°47′ S. 34°55′ E.,

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Nacala Airfield (14°29′ S. 40°43′ E., [redacted] Mozambique's primary international airports at Maputo and Beira, and the regional airfield at Nacala, are major bases for the Mozambican Air Force and assembly points for its Soviet-manufactured combat aircraft. Aircraft of any size can land and take off at Maputo; Beira and Nacala could accommodate C-141s. [redacted]

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Description. Maputo Airport's primary asphalt runway is 3,650 by 60 meters with a 293-meter overrun on a northeast/southwest axis. The secondary asphalt runway measures 1,685 by 45 meters and is oriented east/west. Five aprons provide 67,692 square meters of parking space. Maputo has only limited cargo handling equipment, a known capacity to store 600 barrels of jet fuel although the presence of underground tanks indicates a greater capacity, and a hydrant and truck fuel dispersal system. Good roads and a railroad connect the field to the nearby port and capital city. [redacted]

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This joint military-civilian facility includes a civilian terminal with one large operations building and control tower, five hangars, and approximately 20 support buildings. An adjacent military transport area

includes one large hangar, one large support building, an old probable terminal building, and approximately 20 smaller support buildings. The main military area is surrounded by a double fence and watchtowers, and includes two hangars, one small ammunition storage building, two probable barracks, and approximately 25 other administrative and support buildings. Earth revetments, probably for fighter aircraft, were under construction in early 1986.

Maputo could accommodate estimated daily sortie rates of 136 C-130s (delivering 1,770 tons of cargo), 80 C-141s (3,380 tons), or 32 C-5s (2,240 tons).

Beira's Airport has three asphalt runways including one of 2,400 by 45 meters. The three aprons total 137,305 square meters. The field has standard airline cargo handling equipment and a few storage sheds, but the fuel storage capacity and dispensing system are unknown. A paved road connects the terminal with the nearby rail junction and port. Beira could handle an estimated 240 C-130 sorties (3,110 tons of cargo) or 160 C-141 sorties (6,750 tons) daily.

Nacala's single asphalt runway measures 2,500 by 44 meters. Three asphalt aprons total 44,933 square meters. The field has limited cargo-handling equipment, an operations building and control tower, three hangars, and about 70 administrative, housing, and storage buildings. It has an unknown fuel storage capacity, and fuel is dispensed by truck. Nacala could handle an estimated 112 sorties of C-130 aircraft (1,450 tons of cargo) daily.

Activity. A Soviet Military Assistance Group was established with its headquarters in Maputo in 1977 or 1978. Soviet advisers train pilots and supervise aircraft maintenance for the Mozambican Air Force. Since May 1983, Moscow has stationed two Soviet military transport AN-12s in Mozambique on a rotational basis; although they are based at Maputo, the AN-12s have been seen at regional airfields throughout the country in support of the Mozambican Armed Forces.

Nacala Airport is the assembly point and home base of all of Mozambique's MIG-21 interceptors. Thirty-seven MIG-21s were seen there in February 1986, but other unassembled ones may be in hangars 25X1
25X1
The 25X1
airfield is equipped with ground-controlled intercept radars to support the MIG-21s. 25X1
25X1

Mozambique's approximately 35 MIG-17 fighter-bombers are based at Beira Airport. MIG-17s also have been seen at Maputo and Nacala from time to time, and they have been reported at other airfields as well. 25X1
25X1

Maputo Airport is the primary assembly point and home base for Mozambique's fleet of Soviet-built helicopters. HIND MI-25 helicopter gunships were first observed in Mozambique in October 1983, and by August 1985 at least 16 had arrived—one was subsequently shot down by insurgents. Maputo Airfield sometimes houses at least nine Hip transport helicopters and six AN-26 fixed-wing transports. 25X1
25X1

Defenses. The Maputo area is protected by four SA-3 surface-to-air missile sites, SA-2 missile launchers being installed in April 1986, and air defense artillery, South African 25X1
aircraft bombed and straffed a Maputo suburb in May 1983 without loss, but a reconnaissance drone was shot down later. 25X1
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South Africa

Overview

The South African leadership is facing one of its most serious political and economic challenges since the ruling National Party came to power in 1948. Black opposition to apartheid has generated almost daily rioting and demonstrations throughout the country. President Botha's efforts to introduce limited and gradual racial reforms to the political system have angered more conservative whites and fueled discontent on the part of blacks who want immediate changes to the system. Declining investor confidence has triggered a debt crisis, which has been ameliorated for the moment through an agreement that creditors will roll over most loans through June 1987.

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The primary black opposition group, the outlawed African National Congress (ANC), generally has been unable to harness the domestic unrest, but nonetheless has enjoyed increased international support as a result of intensive media coverage of the violence. Although it is the most popular group among South African blacks, the ANC lacks an effective political and military structure within South Africa. Most of the 4,000 to 5,000 troops in its military wing are located in Angola. The states bordering South Africa have restricted ANC use of their territories out of fear of South African military retaliation. Periodic raids by Pretoria against ANC targets in neighboring states have kept the organization in disarray in recent years.

Indian Ocean Ports

Richard's Bay (28°49′ S. 36°06′ E.,

Durban (29°53′ S. 31°00′ E.,

East London (33°02′ S. 27°55′ E.,

Port Elizabeth (33°57′ S. 25°38′ E.,

South Africa's well-run and highly specialized Indian Ocean ports serve the mineral and agricultural areas of the interior plateau. Richard's Bay, newly developed to handle expanding exports of coal and to relieve congestion at Durban, handles more tonnage than any other port in Africa. Durban is the largest port in Sub-Saharan Africa, and the most important in South Africa in terms of value of exports and imports. East London is the major terminus of the southern railway handling traffic for Zaire, Zimbabwe, Zambia, Botswana, and Malawi. Port Elizabeth handles the agricultural exports of South Africa's Cape and Orange Free State Provinces. Ship repair at Durban and replenishment at the other ports would benefit commercial ships and naval forces operating in the southern Indian Ocean and along the Cape of Good Hope passage around Africa.

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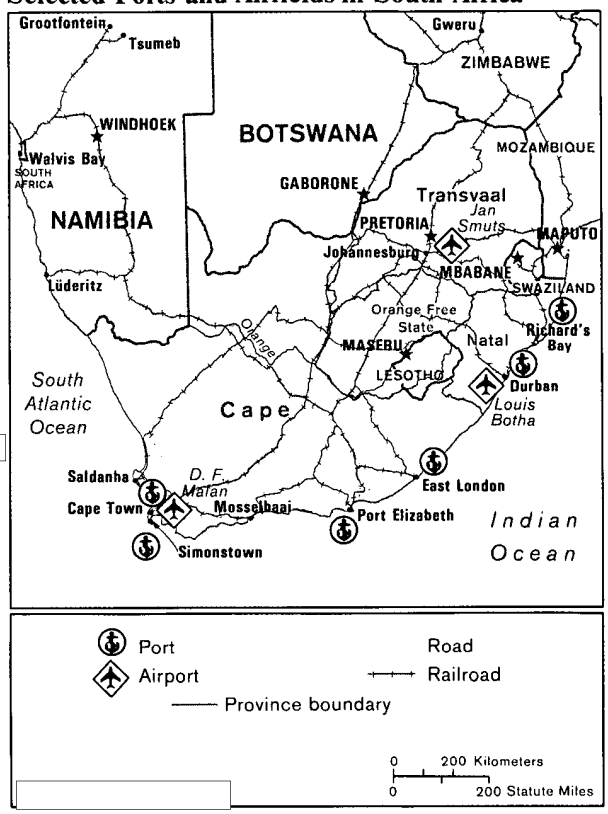
Figure 39
Selected Ports and Airfields in South Africa



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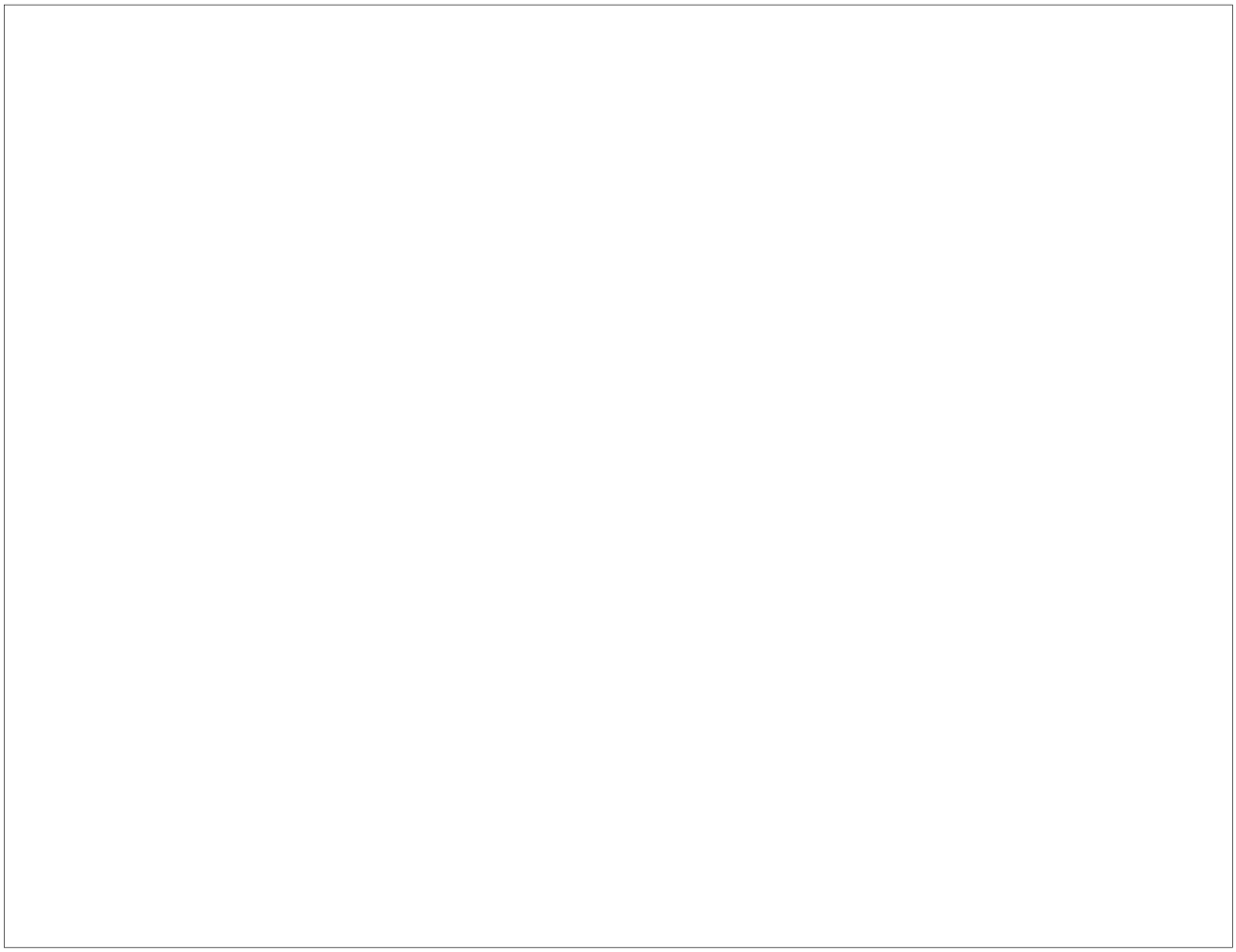

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Description. The four largest ports between the Mozambican border and Cape Town are efficiently managed and well equipped but, except for Richard's Bay, they are shallow by world standards. All four ports accommodate container and roll-on/roll-off ships and tankers. Richard's Bay and Durban are equipped for the import of crude oil, and a major pipeline leads inland from Durban. The largest grain ships that can use Durban, East London, or Port Elizabeth, however, are 30,000 tons in capacity, whereas 50,000-ton vessels are commonplace in the United States.

Northernmost of the four, Richard's Bay has the capacity to handle an estimated 6,765 metric tons of general cargo in a 20-hour workday. It is an improved natural harbor and has an anchorage for vessels of all sizes 4 to 8 kilometers outside the port. The breakwater-protected water area of 538 hectares has depths from 4 to 19.5 meters. The entrance channel is 300 meters wide by 19 meters deep. The port can accommodate ore ships up to 250,000 tons deadweight, according to one press account in early 1985.

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The port facility consists of one 538-meter dry bulk cargo quay, one 159-meter general cargo quay, one

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806-meter coal transshipment quay, and one 160-meter POL berthing wharf. Cargo-handling equipment includes eight 4-ton mobile cranes, three gantry-type traveling conveyor coal loaders, two bulk cargo loaders, and one container crane. The harbor has three tugboats. Three single-track rail lines (all 1.067-meter gauge in South Africa) and two paved roads connect the port with the national rail and road networks.

Located about 160 kilometers south of Richard's Bay is the port of Durban. It is capable of handling an estimated 54,700 tons of general cargo per day, or 84,200 tons of combined general and containerized cargoes. Durban is an improved natural harbor with unlimited anchorage for vessels of all sizes outside the harbor with good holding ground of fine sand. The entrance channel is 1,500 meters long by 185 meters wide and at least 12.8 meters deep.

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Durban port has 1,950 meters of container shipping berths, 1,590 meters of dry bulk cargo berthing, 7,400 meters of general cargo berthing, a 433-meter POL transfer quay, and seven POL bresting wharfs. The port can accommodate the largest general cargo, container, or roll-on/roll-off vessel now in existence.

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Three private shipbuilding and repair firms at Durban share a drydock (80,000 deadweight-ton capacity), a floating dock (lifting capacity of 3,629 tons), and a shipbuilding way (maximum size ship 30,000 tons). The small naval base within the port has a 2,000-ton-capacity synchrolift. The 12,000- to 16,000-ton vessel under construction at Durban—South Africa's first indigenously designed and produced replenishment ship due to be completed about mid-1986—indicates the port's growing shipbuilding capabilities. Durban shipyard may produce surface combatants of corvette size within a decade, and possibly submarines by the end of the century.

Durban is the most versatile and best equipped of the four ports. It has 153 portal jib cranes varying from 4 to 15 tons in capacity, one heavy-lift crane (80 tons capacity), three floating cranes (25, 60, and 200 tons), eight container cranes (40 tons), 13 mobile cranes (6 to 35 tons), and numerous straddle carrier container cranes. The port has more than 300 forklift trucks (3- to 25-ton capacities) and specialized loaders for grain, sugar, alumina, soda ash, molasses, coal, and ores. Harbor craft include nine tugboats. Within the port are at least 94,000 square meters of covered storage in 16 large transit sheds and open stacking space for more than 30,000 TEU of containers.

Every wharf at Durban is cleared by at least one hard-surfaced multilane highway, and virtually all wharves are served by rail. Connections are to the nearby city of Durban, thence on to the nationwide road and rail networks. Louis Botha Airfield, which can take aircraft up to C-141 in size, is 13 kilometers south of the port.

Approximately 380 kilometers southeast of Durban is the port of East London, which can handle an estimated 11,800 metric tons of general cargo per day. Port facilities stretch 1.6 kilometers along both banks of the Buffalo River estuary. The roadstead northeast of the harbor entrance provides poorly protected but extensive anchorage for ships of all sizes in depths of 6 to 27 meters over good holding ground of sand. The entrance channel is 183 meters wide and dredged to a depth of 10.6 meters.

The port has six berths at least 8.5 meters deep for very large oceangoing ships with general cargo, and nine other berths usable by smaller oceangoing vessels. There are two berths equipped with pipelines, one of which can accommodate a large ocean tanker. Shore equipment includes 31 cranes, ranging in capacity from 4 to 20 tons, and about 60 forklifts. There are over 14,000 square meters of covered storage for general cargo, one grain elevator, and 3.5 hectares of open stacking space, including one container storage lot. Repair facilities include a graving dock 198.5 meters long and one floating drydock. Harbor craft include five tugboats. One rail line—only single track at one point—and three multilane hard-surfaced roads connect the port with the national rail and road systems. 25X1

About 240 kilometers southwest of East London is Port Elizabeth, an artificial, breakwater-protected port on Algoa Bay. Port Elizabeth could handle about 15,690 metric tons of general cargo per day. The bay offers extensive protected anchorage in depths of 9 to 18 meters over good holding ground of mud, clay, and shells. The entrance channel is 380 meters wide and 12.2 meters deep. 25X1

The port has three quays and a total of 865 meters of berth space for general cargo and containers, one 198-meter Ro-Ro/bulk cargo quay, one 18-meter-wide Ro-Ro ramp, and one 120-meter POL berthing wharf. Total commercial berthing space is 1,190 meters. There are 41 portal jib cranes, three container cranes, four mobile cranes, two ore leaders, and numerous container straddle carriers. Harbor craft include three tugs and one coastal lighter. The port had 9,200 square meters of covered storage in six transit sheds adjacent to the berths. Open stacking space for about 10,700 TEU of containers is present. Two single-track rail lines and three paved roads clear the port. 25X1

Activity. Following dramatic harbor development projects of the 1970s—including construction of new ports at Richard's Bay and Saldanha, and the conversion of existing harbors to handle containerized cargo—the world recession of the early 1980s has curtailed most port expansion in South Africa. 25X1

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Nonetheless, Richard's Bay has a water area more than three times the size of Durban and could eventually become South Africa's major port. Pretoria is proceeding to double-track a portion of the railway and add three ship berths at Richard's Bay by December 1986, however, which will enable that port to export 44 million tons of coal annually. The entire rail line to the port is to be double-tracked in the 1990s to expand capacity at Richard's Bay to 80 million tons of coal exports each year.

Durban is the country's busiest harbor—handling 25 percent of South Africa's seaborne cargo and more than half its container traffic as of mid-1983, according to official statistics—but is underutilized. Durban, which exports some ores but mostly lighter cargos, had an estimated cargo-handling capability of 35 million tons annually in mid-1984, which was more than 50 percent of the potential of all South African ports combined. It handled almost 450,000 containers in fiscal year 1985, and container traffic had increased at about 15 percent annually over recent years. Exports included coal; manganese, iron, and chromium ores; general cargo; sugar; fruits; and grain. Imported goods included containerized and general cargo, petroleum products, timber, motor vehicles, and other manufactured items.

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With the shift to containerized cargoes, Port Elizabeth has ceased to be primarily an import port for the eastern Cape and Witwatersrand (in Transvaal Province) areas, as well as an important entry point for Zimbabwe. It now is predominantly an export port, handling manganese ore, asbestos, wool, and motor vehicles.

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East London is chiefly an export port for maize. It also handles substantial copper from Zambia and Zaire.

Fuel Storage. Durban had a storage capacity of 10.6 million barrels of crude oil in 35 tanks and 17.7 million barrels of refined products in 552 tanks in May 1984,

Activity at the four Indian Ocean ports in 1982 is shown in the following tabulation:

	Cargo Handled *(thousand metric tons)*	Ships Calling (oceangoing vessels)
Total	**60,242**	**4,537**
Richard's Bay	31,269	679
Durban	18,952	2,374
East London	4,295	543
Port Elizabeth	5,726	941

Defenses. South African defenses are strongest at Durban, where the Navy's flotilla of eight missile boats is based. The boats are Israeli Reshefs produced under license in South Africa, each carrying a normal load of six Skorpion (Israeli Gabriel II) antiship missiles, Five of the boats were operational and three were in storage as of mid-1985.

Each of the ports is protected by a harbor protection unit of South African marines. Each unit normally has two Namacurra patrol boats. he assessed the unit's strength at about 65 marines. The marines are focused on the harbor and any threat from the sea, while South African railways and harbor police control access to the port from land.

South Atlantic Ports

Cape Town, Table Bay (33°54′ S. 18°26′ E., 25X1
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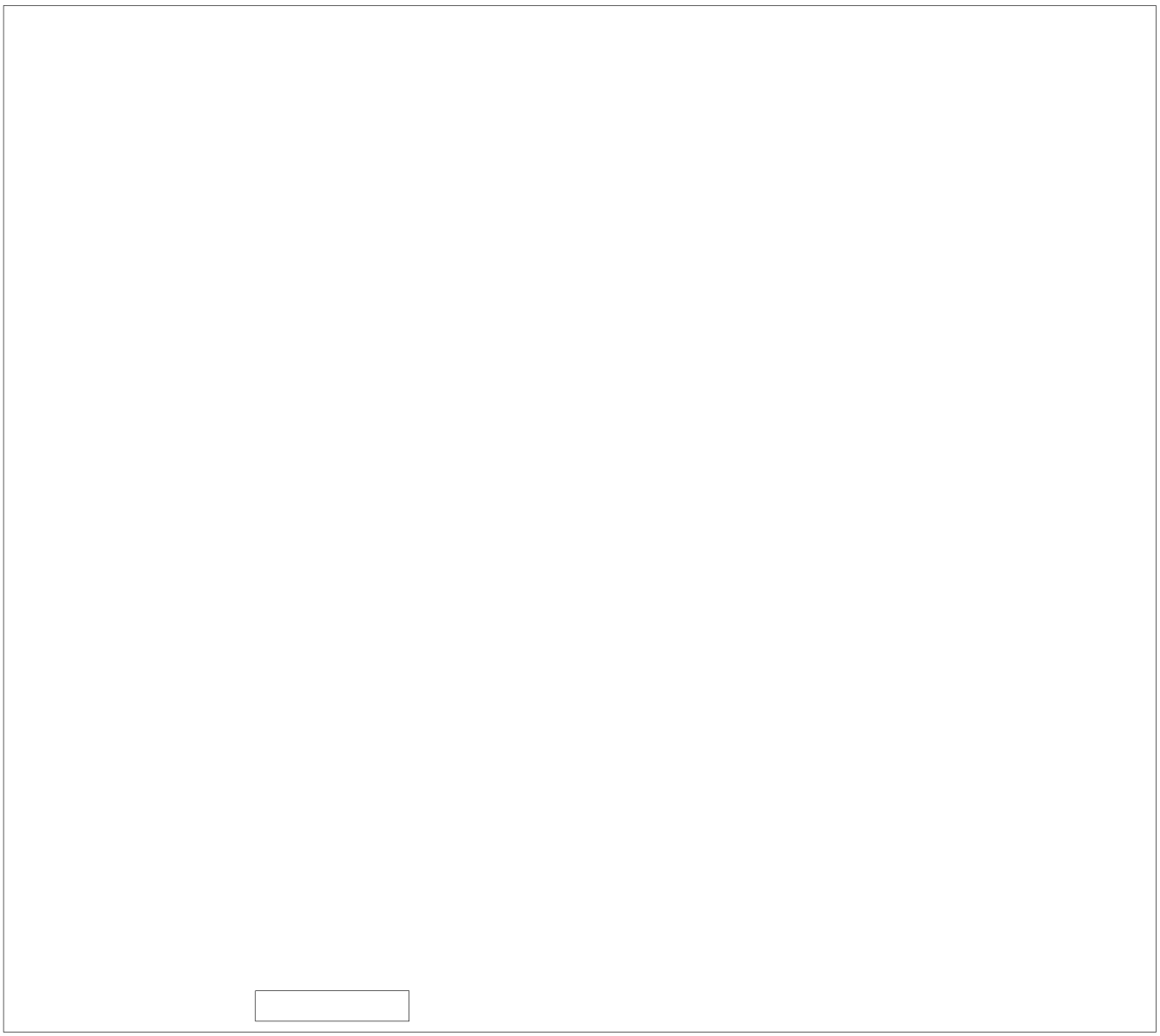
Simonstown Naval Base (34°11′ S. 18°26′ E., 25X1
25X1

Cape Town, located on the Atlantic coast about 55 kilometers north of the Cape of Good Hope, is an important port and railroad terminal for passengers, general cargo, and perishable exports. More ships call there each year than at any other port in South Africa except Durban. Located nearby is Simonstown, the major operating and repair base of the South African Navy and the best-equipped naval base in southern Africa. Its use by US naval forces operating in the region would reduce the need for costly and time-consuming transits to the United States for ship repairs and services. 25X1

Description. Cape Town was capable of handling an estimated 33,400 metric tons of general cargo daily in 1976, and new facilities for container traffic have been added since then. Cape Town has an improved, natural harbor with seven breakwater-protected basins and a small ancillary harbor. Outside the harbor, Table Bay provides extensive anchorage for vessels of all sizes at depths of 11.5 to 36.5 meters over good holding ground of mud and rock. The entrances to the three major basins are all at least 11.5 meters deep, and the harbor has a total water area of about 280 hectares. 25X1

The port contains, 2,650 meters of general cargo berthing, 1,380 meters of dedicated container shipping berths, two 172-meter POL berthing wharfs, one 383-meter bunkering wharf, and one 260-meter offshore bunkering wharf. 25X1

According to published data, equipment at the general cargo wharves in 1985 included the following functional electric cranes: six 15 tons, one-hundred-eighteen 4 tons, and four 3 tons. There was one 15- to 35-ton mobile crane and two floating cranes of 200 and 60 tons capacity. The port had over 200 forklifts, two 25-ton side loaders, and 20 shunting tractors. Harbor craft were five ocean going tugs, three pilot tugs, and three pilot boats. 25X1



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Cape Town port had 50,700 square meters of covered cargo storage in sheds. The container stacking area has a capacity of at least 2,600 TEU and is equipped with five 35-ton cranes. The port is cleared by four hard-surfaced roads linking to the national road system, and by two electrified rail lines. The double-track line connects with the national rail system, and the single-track line extends 35 kilometers to Simonstown.

Sturrock graving dock, located within the port, is the largest in Africa. It is 379 meters in length and can be divided to accommodate two vessels. The other graving dock has a length of 161.2 meters. There is a synchrolift with a capacity of 1,750 tons and four marine railways for repair of small craft.

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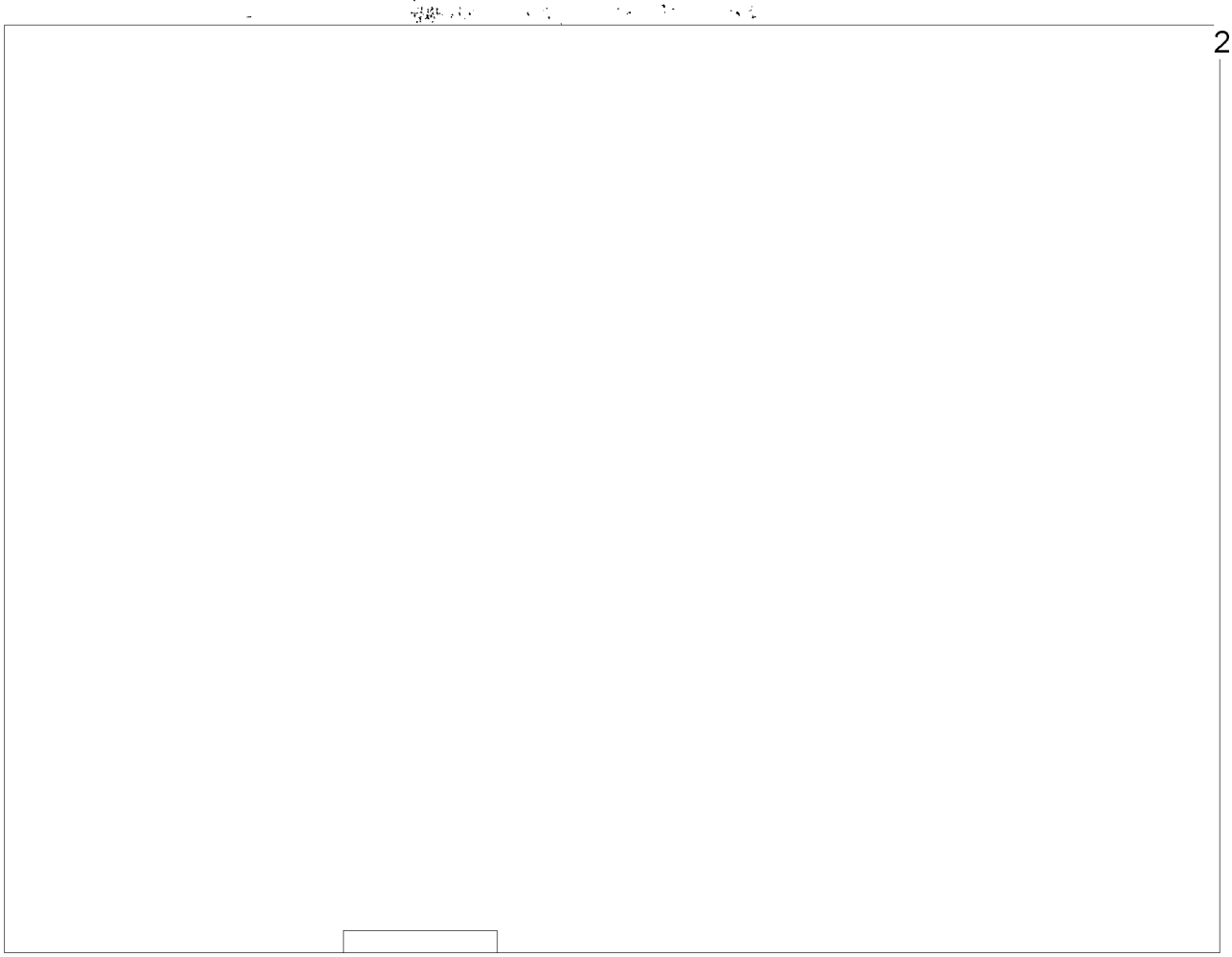

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Simonstown is administered by the South African Navy and has little commercial potential. Between 5,000 and 6,000 tons of general cargo could be unloaded there daily.

Simons Bay provides sheltered anchorage for vessels of all sizes in depths of 12 to 21 meters over good holding ground of mud and sand. The entrance to Simonstown's two well-protected, artificial inner harbors is 91 meters wide and at least 11.5 meters deep. The inner harbor, with a water area of about 11 hectares, has a large graving dock and is used primarily for ship repairs. The submarine harbor, with a water area of about 3 hectares, is the repair and operating base for South Africa's fleet of three diesel submarines.

Simonstown port facility contains the most extensive and modern warship repair facilities of any shipyard from the Cape of Good Hope to Singapore. The largest vessel that Simonstown could accommodate would occupy an anchorage berth 14 meters deep and 323 meters long, or an alongside berth 8.9 meters deep of unrestricted length. Total berthing space for Simonstown Naval Base is 4,474 meters.

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Wharf equipment includes nine cranes, three of which are 50 tons in capacity. Harbor craft comprise three tugs and three launches. The base has about 5,600 square meters of covered storage for general cargo,

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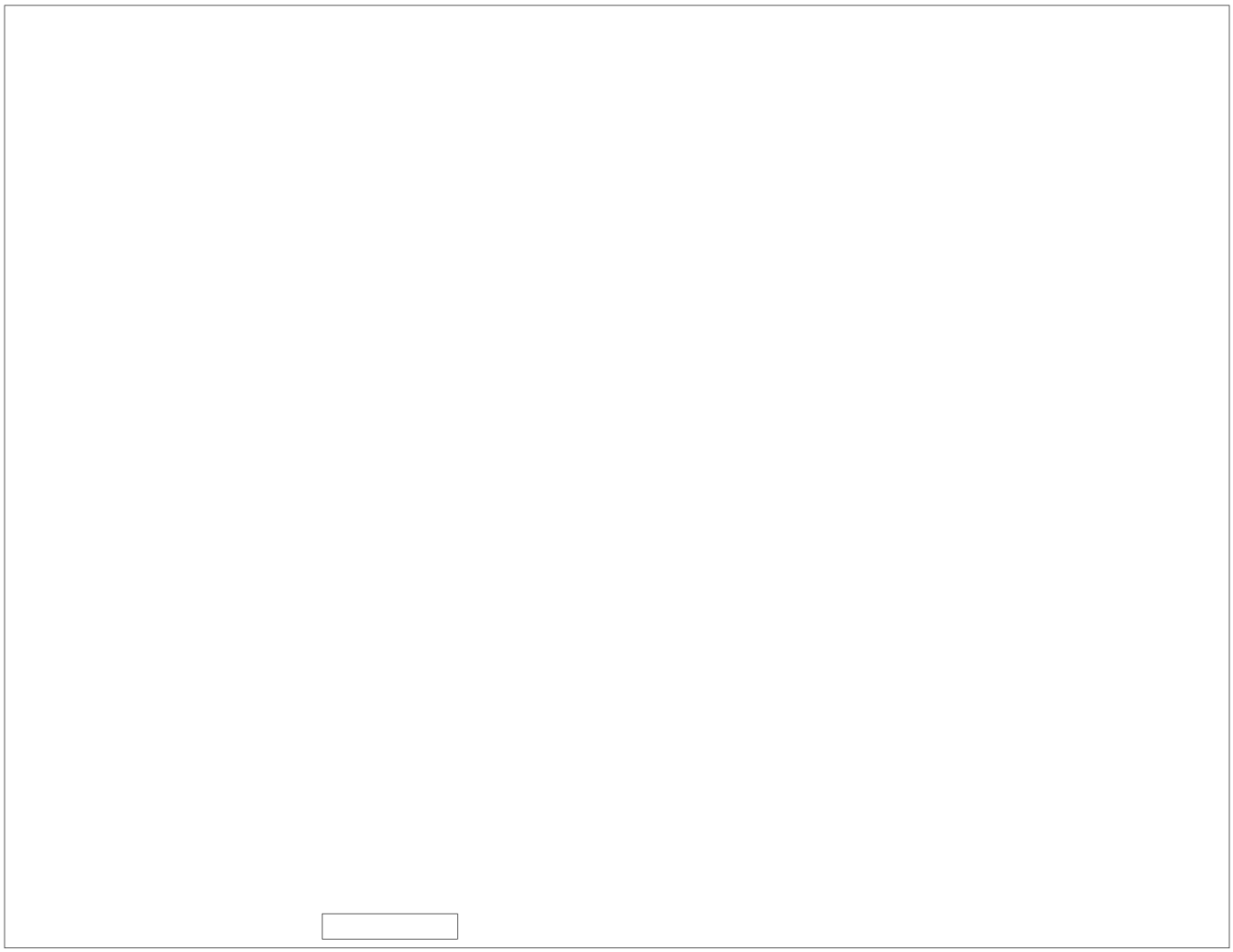

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One paved road and one double-tracked rail line clear the port and connect with the national system. A second road terminates at the Cape of Good Hope.

Simonstown shipyard provides major repairs to naval vessels and is capable of building tugs and small vessels. The graving dock is 237 meters long. The syncrolift has a lifting capacity of 2,500 tons and is able to handle ships up to 60 meters in length. There also are three small marine railways adjacent to the shipyard.

that the facility could handle the following vessels for refit simultaneously: one frigate, one submarine, one missile boat, two mine countermeasures ships, and three smaller vessels.

Activity. Cape Town handled 5,500 tons of cargo, 1,432 ships, and 167,000 containers in 1982. Among South Africa's major ports, only East London and Mosselbaai handled less cargo by weight, but only Durban accommodated more ships and containers. The port handles most of South Africa's fruit and other perishable exports, and a new refrigerated holding store for 500 containers opened in early 1983.

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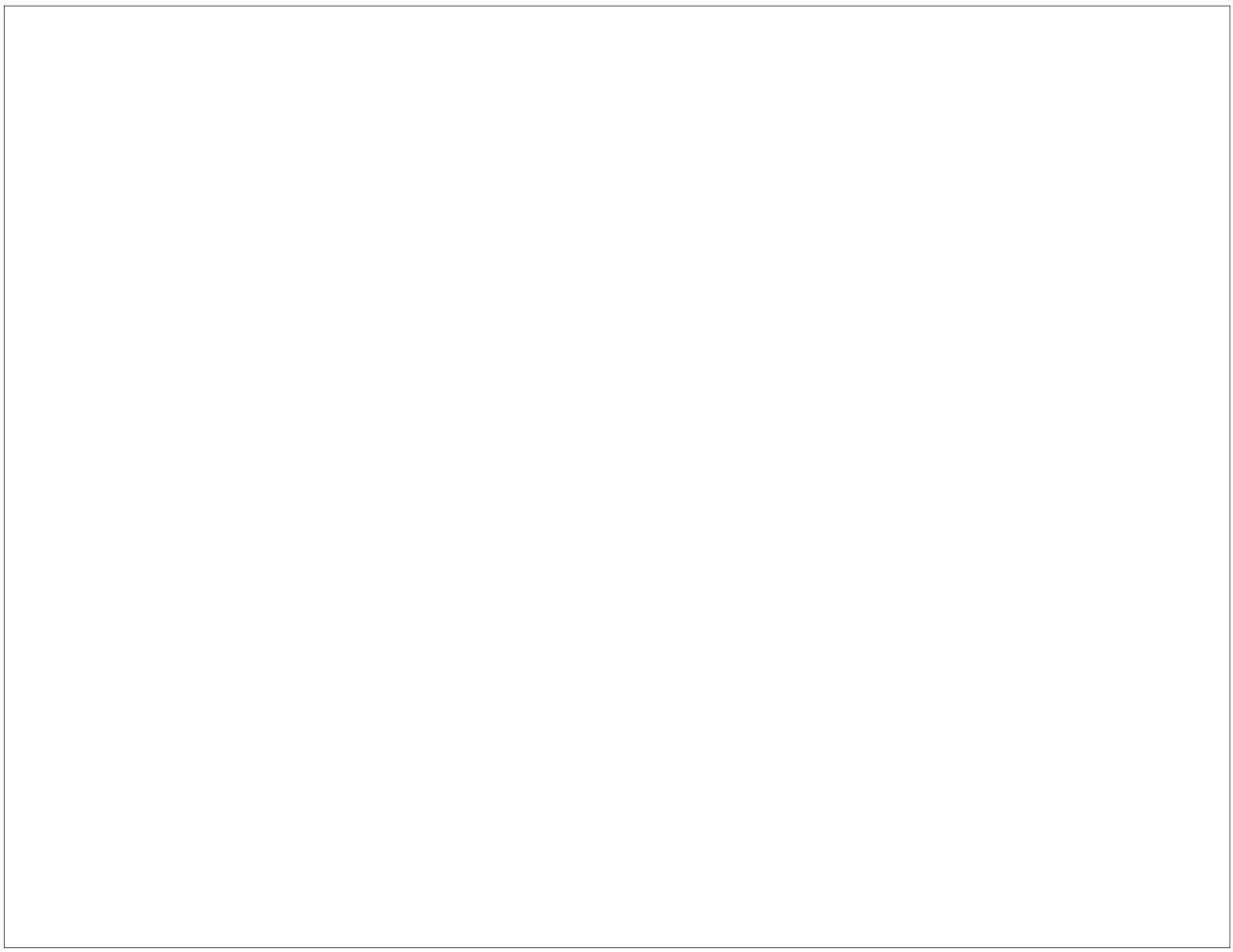

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Fuel Storage. Cape Town had 92 petroleum tanks with approximately 2.7 million barrels of storage capacity in 1976. Simonstown at that time could store about 170,000 barrels of fuel oil, diesel fuel, and gasoline.

International Airports

Jan Smuts Airport, Johannesburg (26°08′ S. 28°14′ E.

D. F. Malan Airport, Cape Town (33°58′ S. 18°36′ E.,

Louis Botha, Durban (29°58′ S. 30°57′ E.,

The international airports at Johannesburg, Cape Town, and Durban are capable of handling aircraft of any size. They serve South Africa's three largest cities and economically most active areas, and are linked to the national road and rail systems. The United States probably would require some use of the airports at Cape Town and Johannesburg should it be required to transport and sustain a UN peacekeeping force supervising a transition to independence in Namibia.

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Description. Jan Smuts Airport is located 15 kilometers northeast of Johannesburg, South Africa's largest city, and about 30 kilometers south of Pretoria, the

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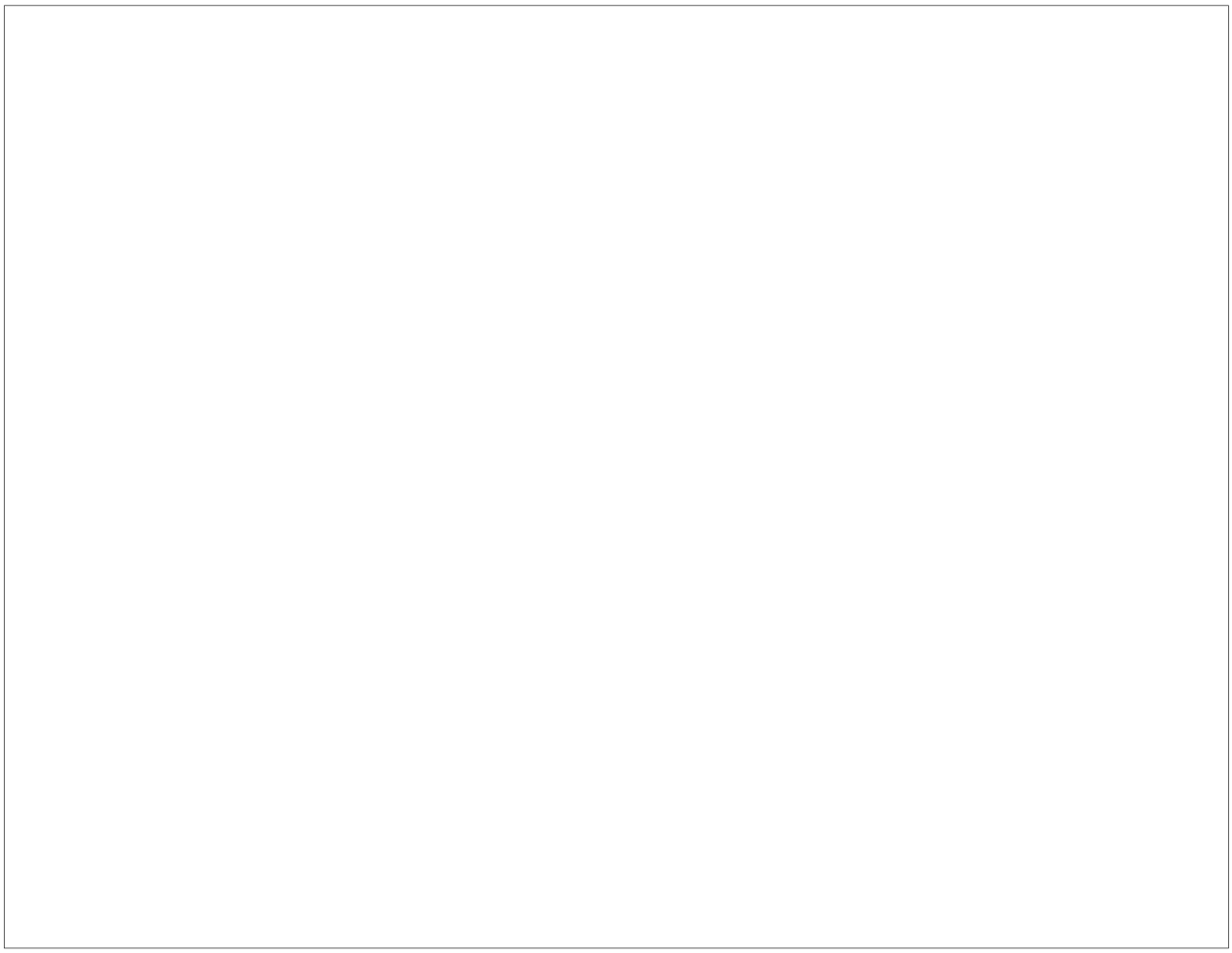

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capital. It has three asphalt runways approximately 61 meters wide and of varying lengths: 4,398, 3,382, and 2,798 meters. The South African press has reported that a new runway put into operation in August 1984 has doubled the airport's capacity from 40 to 80 flights per hour. There are at least six concrete parking aprons, the largest measuring 818 by 362 meters. The field has a control tower, terminal building, and numerous hangars and support buildings. The usual commercial cargo-handling equipment is available. Connections to major highways and rail lines are nearby.

The airport could handle an estimated 240 sorties of C-5 aircraft per day, which could deliver about 16,770 tons of cargo. Alternatively, it could accommodate an equal number of sorties of C-141 aircraft (delivering 10,120 tons of cargo) or C-130 aircraft (3,110 tons).

25X1

D. F. Malan Airport is 11 kilometers east of Cape Town, South Africa's second-largest city and a major road and rail terminal in the south. It is a joint civilian and military airfield with two asphalt runways: 3,187 by 58 meters, and 1,700 by 46 meters. There are numerous taxiways and crossovers. The main support area with the control tower and civilian

25X1

terminal includes 12 hangars and at least 37 maintenance and support buildings. The smaller military support facility includes an administration building, four large hangars, and at least seven support buildings associated with navigational aids and airfield radars. An ammunition storage area contains three revetted storage bunkers, one revetted checkout and storage bunker, two revetted holding areas, and three support buildings.

The airfield could accommodate about 56 daily sorties by C-5 aircraft delivering approximately 3,910 tons of cargo. It could handle about 160 sorties of C-141 aircraft (6,750 tons daily) or 240 C-130 sorties (3,110 tons of cargo).

Louis Botha Airport is 11 kilometers southwest of Durban, South Africa's primary port and third-largest city. It has a 2,425- by 60-meter runway. There are five parking aprons and several taxiways and crossovers. The field is equipped with a control tower and terminal, three hangars, one maintenance building, and 14 support buildings. There is a good highway to Durban, and a rail line just west of the field.

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Louis Botha could handle about 104 C-5 sorties daily, delivering 7,260 tons of cargo. It could accommodate 232 C-141 aircraft in a day (delivering 9,790 tons of cargo) or about 240 C-130 sorties (3,110 tons).

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Fuel Storage. All fields have commercial jet fuel available and dispensed by a hydrant system and refueling trucks. Fuel storage capacity at D. F. Malan is an estimated 1,350 barrels, that at Louis Botha is approximately 1,540 barrels, and that of Jan Smuts is 20,250 barrels. The fuel storage capacity of all three airfields is probably much greater but cannot be determined because the tanks are underground. Substantial storage capacity is available in the industrial and port areas near all three airports.

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Activity. Most international flights to South Africa terminate at one of these three airports, all of which offer good connections to local flights, roads, railways, and ports.

25X1

Defenses. The South African Air Force maintains operational bases near all three airfields, although its Mirage interceptors normally are based at two Air Force bases near Jan Smuts Airport. They could be deployed quickly to protect the other fields. South Africa

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has moderate numbers of low- and medium-altitude SAMs and antiaircraft artillery. Substantial ground forces are available to secure all three airports quickly against a threatened seizure. Pretoria probably would have strategic warning of any major attack on South Africa, and the Air Force is steadily expanding its tactical early warning radar coverage in the region.

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Namibia

Overview

South Africa first occupied then German South-West Africa (Namibia) in 1915 as a British ally in World War I. In 1920 the region was given to the South Africans as a mandate by the League of Nations. Since that time, Pretoria has continued to govern the area in "the spirit" of that mandate despite United Nations insistence on immediate elections and Namibian independence.

South Africa insists that any future government in Windhoek must be to its liking. As a result, an interim government formed by the Multi-Party Conference (MPC), a South African–backed coalition of political parties, took office in Windhoek in June 1985.

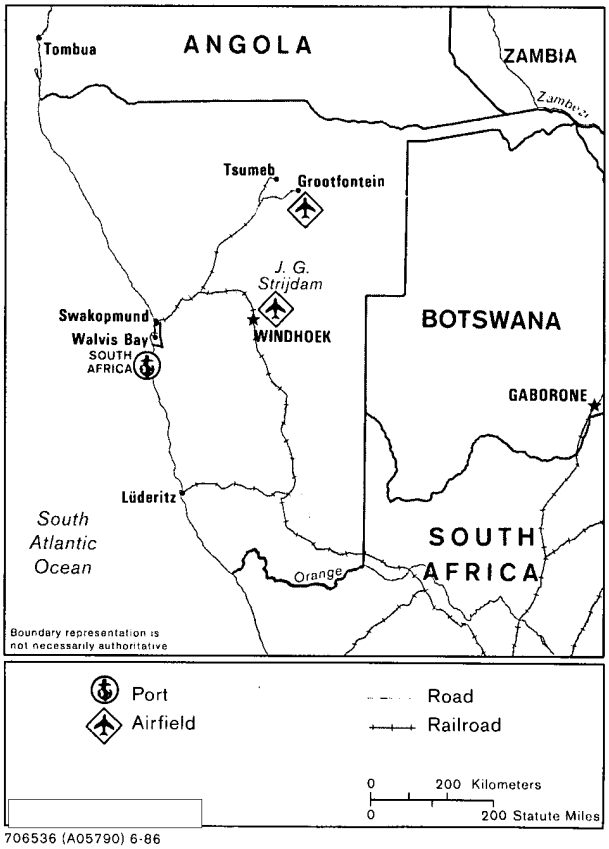
According to the US Embassy, the South African Administrator General in Windhoek retains veto power over the government's actions, and Pretoria controls Namibia's defense, security, and foreign affairs. The South Africans, however, are attempting to enhance the interim government's legitimacy by giving it opportunties to dispense patronage as well as control of the country's railroads and the port of Luderitz. In addition,

that South Africa's counterinsurgency police force has been absorbed into the local police force.

No foreign nation has recognized the MPC government. The international community supports UN Resolution 435, which calls for immediate elections in Namibia and declares null and void all unilateral internal measures aimed at giving the country independence. The UN recognizes the South-West Africa People's Organization (SWAPO)—which probably has the support of 50 percent of the population—as the sole legitimate spokesman for the Namibian people.

SWAPO refuses to participate in the interim government and plans to intensify its 20-year-old guerrilla struggle against the new authorities in Windhoek and their South African backers. We believe, on the basis of a variety of sources, that SWAPO has come under increasing Soviet Bloc influence over the past decade and receives large amounts of arms, money, and training, although the exact amounts are not known. Soviet influence can be seen in SWAPO rhetoric, which increasingly emphasizes socialist goals.

Figure 49
Selected Port and Airfields for Namibia



Walvis Bay (Walvisbaai) [1] (22°57′ S. 14°29′ E.,

Walvis Bay—a self-arrogated South African exclave in Namibia—is the only deepwater port along the 3,000-kilometer coastline of southwestern Africa between Luanda and Cape Town. It is linked to central

[1] Walvis Bay is actually an exclave of South Africa.

25X1

25X1

Nambia and South Africa by rail, road, and air, and to Angola and Botswana by roads. The port offers the most economical means for the United States to meet its obligation to deliver and maintain a projected 7,500-man UN monitoring force that would be required in the event that a UN plan is implemented for a transition to independence in Namibia.

Description. The anchorage is 5.5 to 14 meters deep over good holding ground sheltered by a 9-kilometer-long natural sand breakwater. Ships enter the port through a channel that is 3,500 meters long, 135 meters wide, and over 10 meters deep.

The wharf has an alongside depth of 10 meters and an easily dredged sandy bottom. The port has 1,375 meters of commercial berthing for general cargo, container, and Ro/Ro vessels. The wharf is equipped with 20 portal jib cranes with a lifting power of between 3 and 15 tons, plus two overhead gantry cranes of 25-ton capacity used to stack containers. A synchrolift capable of lifting a 2,000-ton vessel is used almost exclusively for repair and servicing of the fishing fleet. The synchrolift is connected to a rail network on shore, which allows eight to 10 vessels to be under repair in the shipyard simultaneously. Just offshore is a 235-meter tanker quay, 10 meters deep alongside.

25X1

25X1

Walvis Bay is capable of unloading and transporting inland an estimated 10,700 tons of break bulk and container cargo daily. If the cargo is all break bulk, the port's capacity is only 5,600 tons per day. Available storage capacity is 38,215 tons, and clearance capacity is 46,750 tons per day by road and rail. Storage adjacent to the quays consists of 4,200 square meters under cover in three transit sheds and open storage. The container storage area has a capacity of about 575 TEU, with an additional 100 TEU in open lot.

25X1

25X1

Connections to Namibia and South Africa include a single-track, 1.067-meter railway, a two-lane all-weather highway, and a civil/military airport that can accommodate jet aircraft up to C-141 in size. Roads to Angola are tarmac and generally good. The runway at nearby Rooikop Airfield is asphalt and measures 2,133 by 45 meters.

Namibia's only other port—400 kilometers to the south at Luderitz—is too shallow for oceangoing ships. The draft is only 6 meters deep alongside the 150-meter wharf—and the rocky bottom would be difficult to dredge—so ocean vessels must unload via lighters. Luderitz supports a fishing fleet and two crayfish firms. It has limited cargo-handling equipment and storage facilities, lacks a heavy-duty rail link, and is located far to the south of Namibia's population and economic centers.

Contingencies. The United States has agreed to transport and supply UN monitoring forces that would be required to oversee any transition to Namibian independence under UN Security Council Resolution 435. The use of Walvis Bay would be essential to do so economically, and the task probably would still require supplemental use of other ports and airfields in Namibia and South Africa.

Walvis Bay's location on Namibia's central coast—with no comparable facilities for about 1,500 kilometers to the north or south—makes it a valuable site for a naval base. The port could support vessels patrolling the Cape route along which petroleum from the Persian Gulf and strategic minerals from southern Africa are carried to the United States and Western Europe. The route would be vital if the Suez Canal were closed. A naval base at Walvis Bay also could be useful to counter Soviet naval and naval air reconnaissance forces operating from Angola.

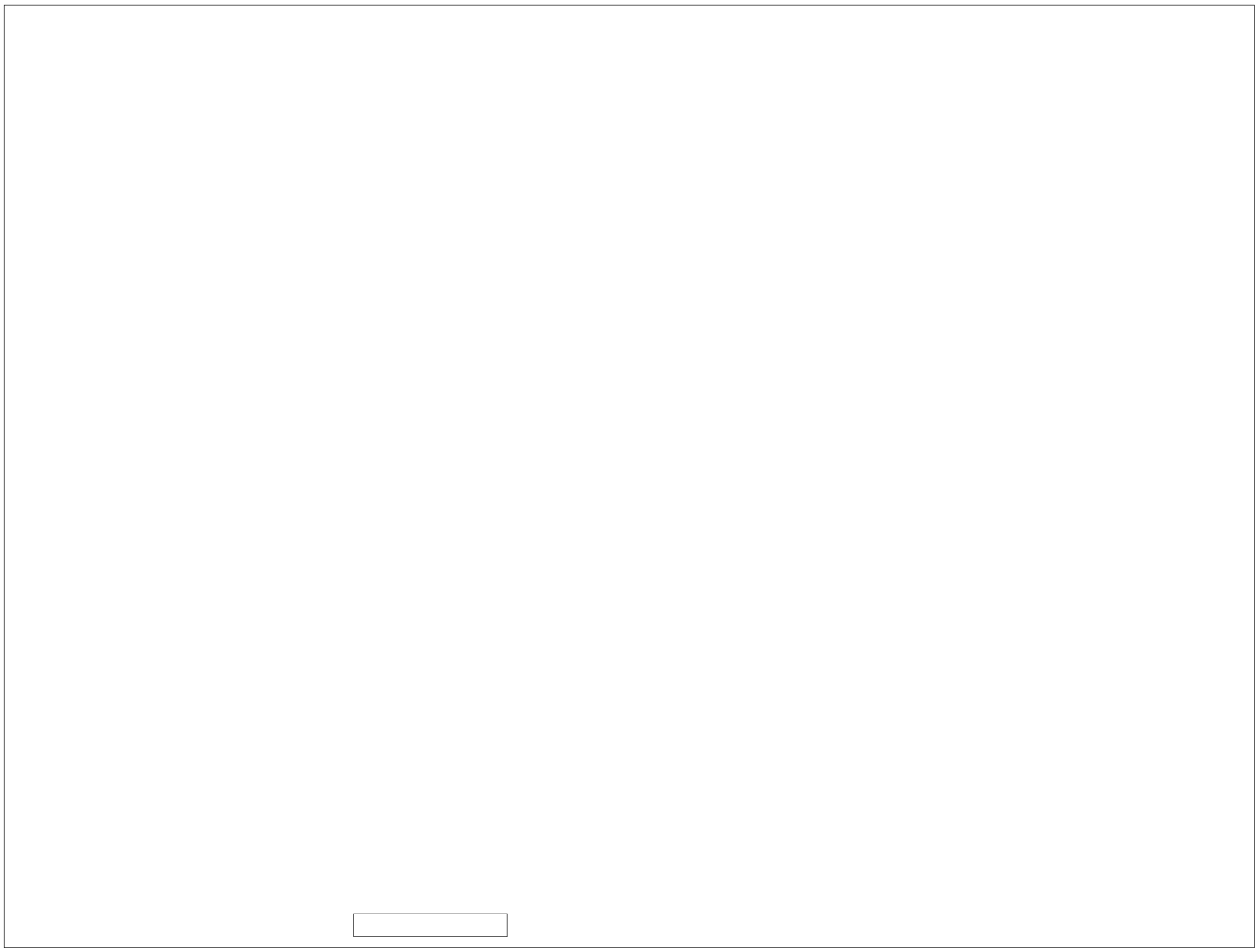
Activity. Walvis Bay handles about 40 percent of Namibia's foreign trade—97 percent of its sea traffic—including nearly all base mineral exports and most imports of fuel oil and manufactured goods, according to academic sources and the South African press. A recent press article said that about 1,000 ships dock there each year, and the port annually handles about 800,000 tons of cargo, including some 17,000 containers. The port is operated by the South African Transport Service, a governmental agency, and was operating at 20 percent of capacity in March 1983. If the port were reserved entirely for military use, emergency food and oil supplies for the civilian populace could be landed at Luderitz and the small, heavily silted harbor at Swakopmund, 30 kilometers north of Walvis Bay. 25X1 25X1

Walvis Bay supported a thriving fishing industry until the late 1970s, when the pilchard fish virtually disappeared. The seven canneries closed at that time and about half of the labor force departed, but by March 1983 three of the fish-processing factories had reopened and a large fishing fleet was again homeported at Walvis Bay. 25X1

Were it necessary to expand port capacity and operations rapidly, ample unskilled workers are available locally—including former dockworkers in the segregated townships of Narraville (for blacks) and Kuisebmond (for mixed-race Coloreds)—but obtaining the necessary skilled personnel probably would require bringing in whites from South Africa. The port has been undergoing renovation and modernization in recent years. 25X1 25X1 25X1

Fuel Storage. The harbor can store 1.25 million barrels of refined fuels in 52 tanks. Fuels are available at the quay from tank cars.

Defenses. The harbor is protected by the South African 131st Marine Protection Unit (MPU), which has three Namacurra patrol boats. The include divers trained in explosive ordnance disposal. The 2nd South African Infantry Battalion Group—a unit of approximately with some armored cars and artillery—also is based in the enclave in the town of Walvis Bay and 19 kilometers to the east at Rooikop. Landward access to the harbor is controlled by a police checkpoint at the gate. No sabotage has been reported at the port, but SWAPO guerrillas have blown up sections of the rail lines between Walvis Bay and Swakopmund, as well as north of Windhoek. 25X1 25X1 25X1 25X1 25X1 25X1



25X1

25X1

The South African Navy operates radar and surveillance equipment and maintains a 24-hour communications watch at Walvis Bay reinforcements could arrive by air or sea from South Africa. Pretoria's forces include three diesel attack submarines and eight missile boats, and its most capable interceptor is the Mirage III.

The two largest airfields in Namibia serve the capital city of Windhoek and the major logistics base at Grootfontein. These airfields ensure that South Africa can reinforce and supply its forces in northern Namibia rapidly to counter any likely threat to the territory. UN forces supervising a transition to independence in Namibia probably would use both airfields, as well as many of the secondary airstrips in the north.

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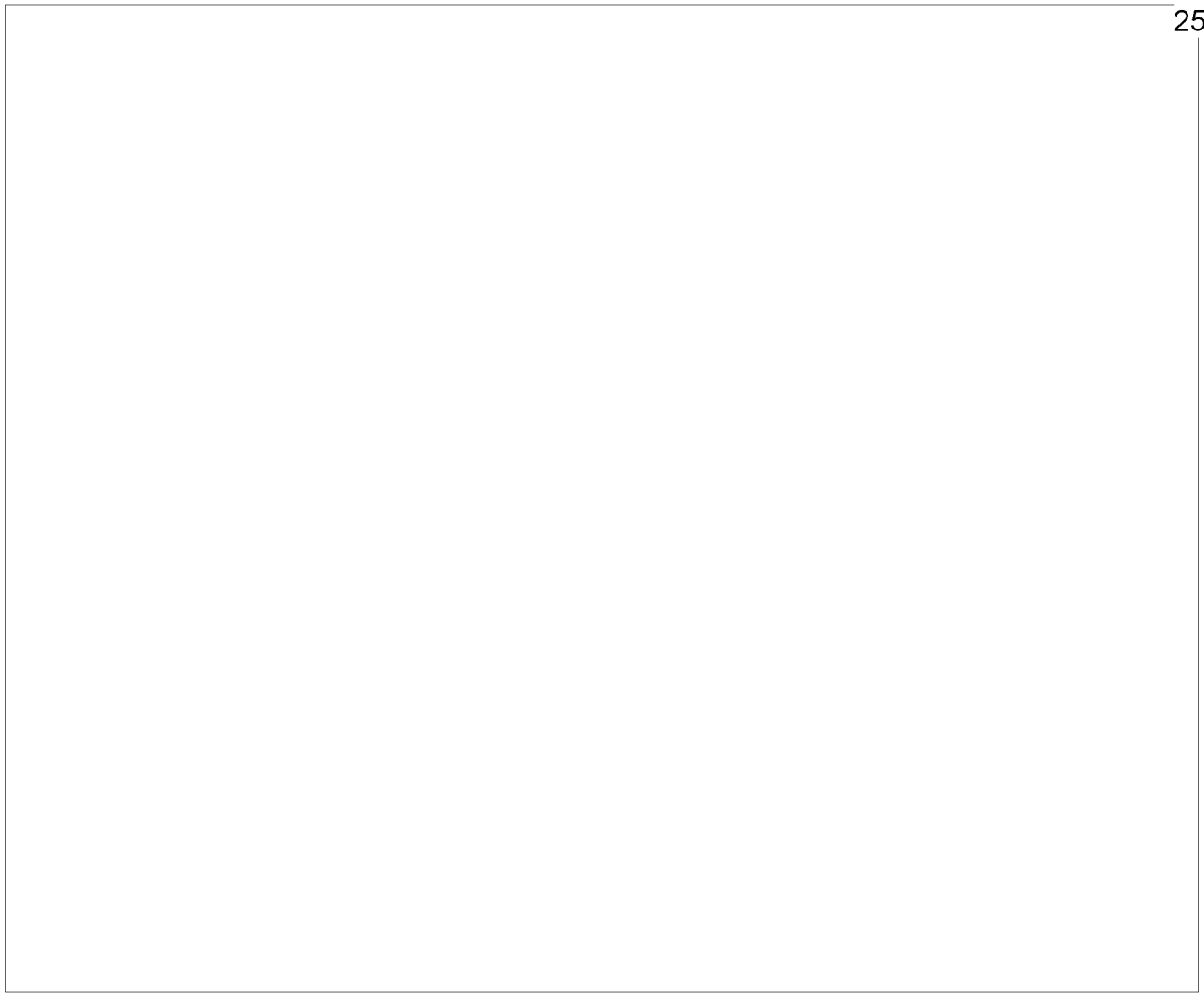
J. G. Strijdom Airfield (22°29′ S. 17°28′ E.,

Description. J. G. Strijdom Airfield can accommodate aircraft of any size. Its two asphalt runways measure 4,729 by 46 meters and 1,526 by 31 meters,

25X1

Grootfontein Airfield (19°36′ S. 18°08′ E.,

25X1



25X1

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The single concrete and asphalt apron has an area of 96,000 square meters. The field is equipped with a control tower and VOR, VHF/DF, and NDB navigational aids. It is connected to the capital, approximately 40 kilometers to the west, by a two-lane bituminous highway and a single-track, narrow-gauge railway.

Strijdom Airfield could accommodate approximately 40 sorties of C-5 aircraft delivering 2,795 tons of cargo each day. Alternatively, it could accept about 80 sorties of C-141 aircraft (3,375 tons per day) or 176 sorties of C-130 aircraft (2,285 tons per day). Light aircraft up to C-47 also could land at nearby Eros Field, just outside of Windhoek.

25X1

25X1

Grootfontein Airfield can handle aircraft up to the C-141 in size. It has two asphalt runways: the first is 3,560 by 45 meters and the second is 1,200 by 30 meters. Five concrete and asphalt parking aprons have a total area of 137,000 square meters. The field has a control tower and separate civilian and military terminals. It is connected to the nearby military base and to Namibia's road and rail network by a two-lane bituminous highway and a single-track rail spur.

25X1

25X1

Grootfontein Airfield could accommodate approximately 88 sorties of C-141 aircraft delivering 3,710 tons of cargo each day. It could handle 240 sorties of C-130 aircraft and 3,115 tons of cargo daily. 25X1

Fuel Storage. J. G. Strijdom Airfield can store an estimated 6,900 barrels of A-1 jet fuel, which is dispensed by a hydrant and truck system. The estimated fuel storage at Grootfontein Airfield is 63,800 barrels; the dispensing system is hydrant and truck. 25X1

Activity. Both military and civil flights from South Africa land at Strijdom and Grootfontein Airfields. The rail line from South Africa passes through Windhoek to terminate at Grootfontein, so most heavy cargoes arrive by rail. Troops destined for the border, however, have been observed 25X1 arriving at Grootfontein by air from South Africa. The logistics command at Grootfontein distributes men and supplies by truck to the military units throughout the northern border region. 25X1

Defense. South Africa provides all air defenses in Namibia. South Africa's best interceptor—the Mirage III, armed with air-to-air missiles—is not normally based in the territory but can be deployed there quickly. Pretoria also has older Mirages and indigenously built Impala fighter-bombers. 25X1

Ground forces in proximity to J. G. Strijdom and Grootfontein Airfields include an understrength brigade of territorial reservists headquartered in Windhoek and South African and territorial units assigned to the major logistics base at Grootfontein. Sufficient combat forces to secure both airfields could deploy quickly from the northern border area or South Africa itself. 25X1

Angola

Overview

President Jose Eduardo dos Santos has ruled Angola since September 1979, following the death of Agostino Neto, the founder of the ruling Popular Movement for the Liberation of Angola (MPLA). Dos Santos, who lacks the charisma and reputation of Neto, faces heightened antagonisms between the country's blacks and mulattoes, worsening economic difficulties, and social unrest, in addition to South African incursions and an expanding civil war. 25X1

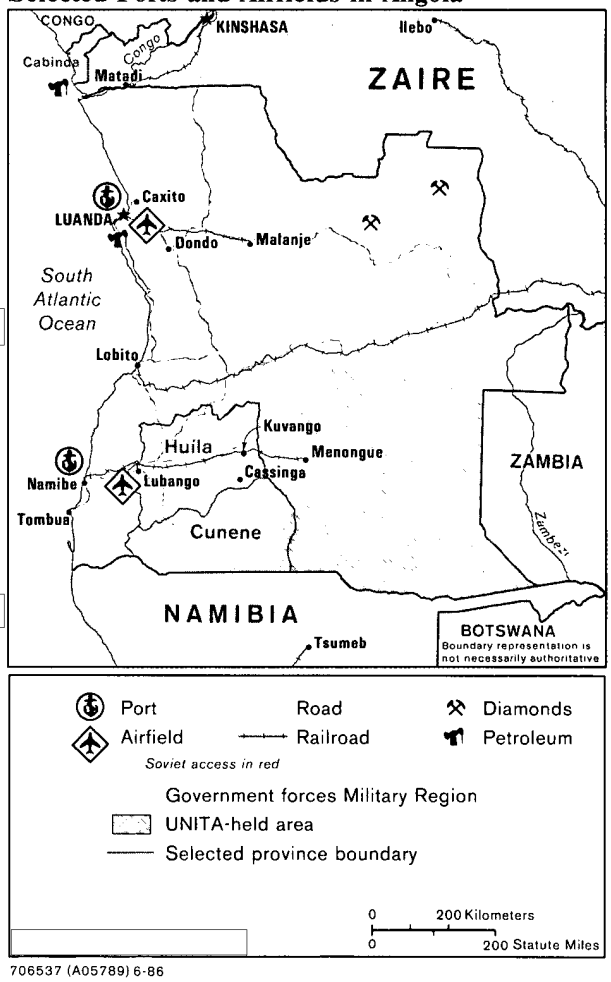
Despite the country's problems, dos Santos not only has retained power but also has significantly expanded his control over the MPLA through skillful political maneuvering and balancing of factions in the leadership. We believe that his Marxist regime remains firmly tied to the Soviets and Cubans, although Angola has attempted to adapt the structure of his national Communist regime to local conditions. 25X1

Angola's civil war has dragged on for over 10 years with no end in sight. The belief of the ruling party that it would be able—with Soviet and Cuban backing—to defeat the guerrillas of the National Union for Total Independence of Angola led by Jonas Savimbi has been shaken by the insurgents' continued success. The dos Santos regime controls the urban centers but has been unable to subdue UNITA in the countryside. In our opinion, the insurgents still appear to have the momentum and are increasingly capable of urban attacks. They cannot, however, dislodge the MPLA from the cities or force dos Santos to the negotiating table. 25X1

Since 1976, we estimate that the USSR has delivered over $2.6 billion in arms to Luanda, making Angola the sixth-largest recipient of Soviet weapons in the world. Moscow sharply increased military sales to Angola in recent years, following stepped-up UNITA operations and South African incursions into southern Angola. There are now some 1,200 Soviet and 500 East European military advisers in Angola. In addition, there are some 36,000 Cuban troops and military advisers as well as an additional 6,000 Cuban civilian advisers and technicans. 25X1

Angola pays for most of this assistance in hard currency earned from its petroleum industry. Although there is some dissatisfaction in both the military and party leadership about Angola's strong ties to its Communist allies, we believe most government officials recognize that the MPLA would collapse without Moscow's and Havana's support. 25X1

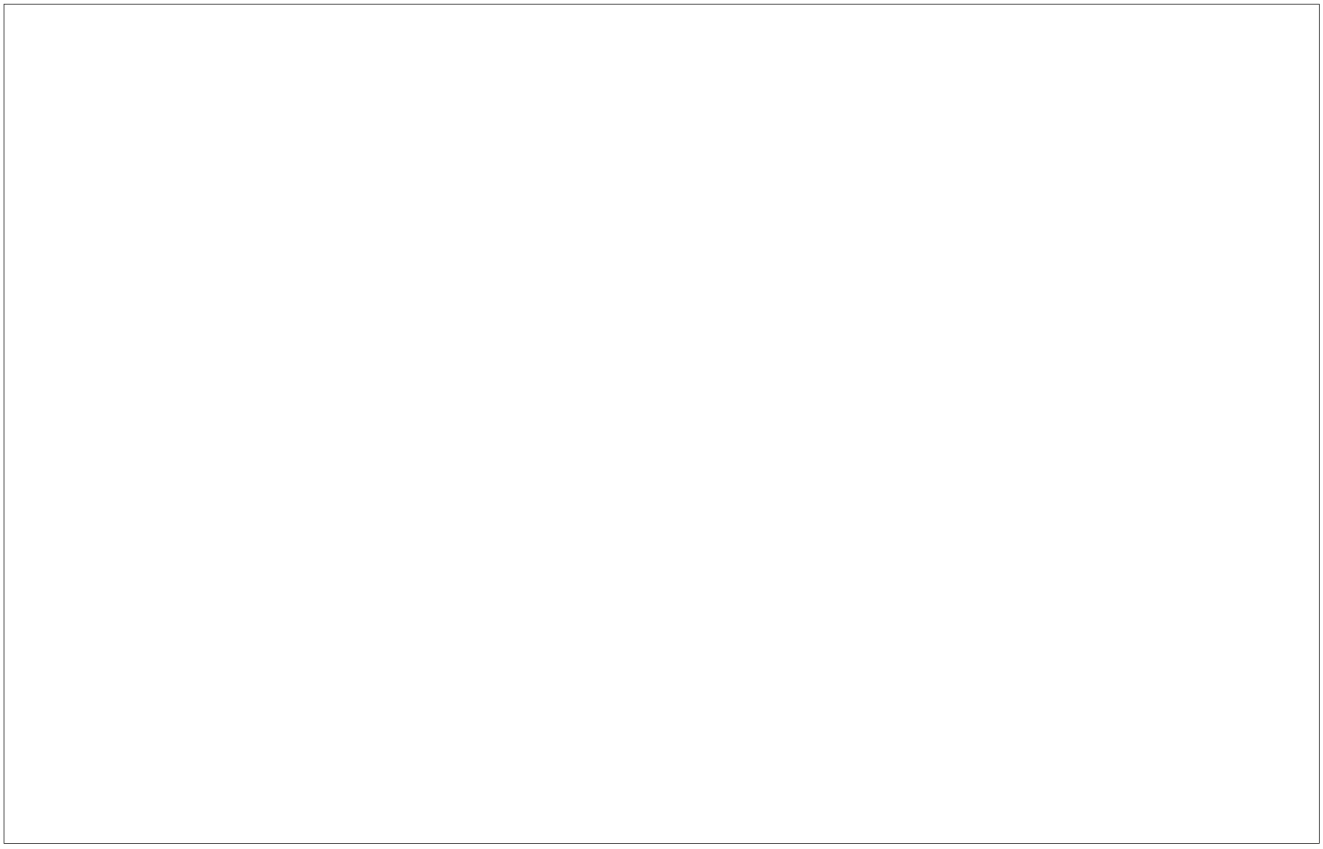
Figure 53
Selected Ports and Airfields in Angola



25X1

Namibe (Mocamedes) Port (15°11′ S. 12°08′ E., 25X1

25X1
25X1



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Luanda Port (08°47′ S. 13°14′ E.) Angola's deepwater port at Namibe is located on the southern coast of Angola, 340 kilometers southwest of Lobito. Located at the edge of the desert on the southeastern shore of a large shell-shaped bay, it was, prior to independence, Angola's leading facility for iron ore exports from the now closed Cassinga mine. Today, seaborne deliveries of Soviet weapons and military equipment arrive at Namibe to supply Angolan and Cuban forces stationed in southern Angola near the insurgent-dominated southeast and the border with South African–occupied Namibia.

Luanda's deepwater harbor, located 290 kilometers south of the Congo River delta, is Angola's major port of entry and principal naval base. A 10-year insurgency has disrupted the transportation network and has isolated the harbor and capital city from much of the Angolan interior. Nonetheless, the congested port handles most Angolan foreign trade, deliveries of Soviet military equipment, and support of Cuban and Angolan combat forces.

25X1

25X1

Description. Namibe is a natural coastal harbor. Much of Baia de Namibe (Namibe Bay) is too deep for anchorage, but the shallower southeastern sector has good holding ground of mud. The bay is easily approached from the north, although there are no warning lights on the Baixo Amelia sandbank to the south.

25X1

General cargo facilities are located at Namibe port; and ore, petroleum, and fishing facilities are 7.2 kilometers to the north at Porto Saco. General break-bulk cargo is handled at a 917-meter quay with depths alongside of 6 to 10 meters. The ore facility at Porto Saco is 325 meters long with 19-meter-deep berths alongside. Namibe has eight portal jib cranes and Porto Saco has a 3,500 ton-per-hour ore loader and three POL pipelines. Two transit sheds provide

25X1

approximately 6,700 square meters of covered storage adjacent to the quay, while two other storage sheds add another 3,300 square meters. There also are two large cold storage buildings and 15 hectares of open space for vehicle parking and bulk cargo offloading.

Two all-weather roads connect the port with Tombua 94 kilometers to the south, and Kuvango, 722 kilometers to the east. A narrow-gauge rail line runs 756 kilometers east to Menongue. Two airfields near Namibe can handle aircraft up to AN-26 or C-130 in size.

Luanda's port and naval base are located within a tidal harbor, naturally sheltered by a long narrow sandspit. The approach to the harbor is unobstructed with a fairway width of 2.7 kilometers and a minimum depth of 27.5 meters. Anchorage is well protected and 22 to 30 meters deep over good holding ground of mud and sand.

The commercial cargo area offers 2,150 meters of berthing alongside one mole and two quays. An offshore POL terminal has two sets of mooring buoys and a specialized cement pier. Eighteen transit sheds provide 57,000 square meters of covered storage adjacent to the berths with an additional 7 hectares of open storage area.

The port accommodates container traffic and Ro/Ro vessels, but equipment shortages hamper efficient operation. Although the quay has 40 cranes with capacities of 3 to 10 tons, several lighter mobile cranes, and 76 forklifts, much of the equipment has deteriorated beyond repair. A new container terminal and warehouse were still under construction in early 1986.

Overland routes from the port include two all-weather roads southeast to Dondo and northeast to Caxito and a narrow-gauge rail line east to Malanje. Nearby Luanda Airfield is a modern commercial and military facility accommodating jet aircraft of any size.

Patterns of Access. Since the closure of the Cassinga iron mine and decline of the fishing industry in the mid-1970s, Namibe's strategic importance has been as a gateway to the southwestern provinces of Huila and Cunene, a region housing large government forces and subject to increasing insurgent attacks. The port is connected by rail and road with Lubango, where there is a major Angolan airbase and garrisons for Angolan, Cuban, and SWAPO insurgent forces. SWAPO bases in southwestern Angola have been the targets of South African incursions, while Angolan forces have engaged UNITA guerrillas operating in the area. The railway segment from Namibe to Lubango provides a vital conduit for military supplies and equipment destined for Angolan and Cuban troops in the south. 25X1

Most Soviet military aid arrives at Luanda harbor, some of which is then transshipped to ports farther south. The former Portuguese naval base adjacent to the harbor is the primary naval installation used by the Soviet West African naval forces. At least one Soviet naval vessel, usually a guided-missile destroyer, a landing ship, or a minesweeper, has been stationed at Luanda since 1982, and a repair ship is often moored there as well. Major combatants, which are not part of the West African naval patrol, regularly visit Luanda. These have included nuclear-powered attack submarines, a guided-missile cruiser, and a Kiev-class aircraft carrier. 25X1

Activities. A major port since the 16th century, Luanda harbor's importance to the Angolan Government has increased with civil unrest and economic deterioration caused by a decade of insurgent warfare. UNITA has attacked economic targets throughout the country, and insurgents or South African commandos severely damaged Angola's only petroleum refinery at Luanda in late 1981. In early 1984, they sank two ships in Luanda harbor. Moreover, the Angolan economy has not recovered from the loss at independence of the skilled Portuguese labor force. 25X1

Food imports by sea are essential to support Luanda's approximately 1.2 million population, which has nearly tripled since 1970. The port is less critical to the 25X1

petroleum industry—because operations are mostly offshore at Angola's exclave of Cabinda 380 kilometers to the north—or to the diamond industry, which exports mostly by air. Exports of cement and textiles, however, depend upon the port.

Defenses. The Angolan Navy makes limited use of Namibe, although there is no permanent naval base there. The Soviets have installed coastal surveillance radars, and the port is defended by two SA-3 missile sites, part of the air defense system along the Namibe-Menongue rail line.

At Luanda, Angola maintains a naval force of about 40 patrol boats and landing craft, and about 1,500 to 2,000 troops. The force includes six Osa-class missile delivered by the Soviets in 1982-83. The Soviets have also provided coastal surveillance radars located at Luanda and nearby Cabinda. In 1984, SA-3 missile sites were established in the Luanda area.

Luanda Airport (08°51′ S. 13°14′ E.,

Lubango Airfield (14°55′ S. 013°34′ E.,

Luanda Airport is Angola's principal military and commercial airfield and also serves as the primary gateway for Cuban troops arriving from Havana. The airfield is also the assembly point for Soviet-supplied military aircraft, including MIG-21, SU-22, and MIG-23 fighters, and MI-8, MI-17, and MI-25 helicopters. Since the interdiction by guerrillas and deterioration of the land and rail transportation system, air transport has emerged as the primary means to equip and resupply isolated Angolan and Cuban military garrisons, which puts a heavy burden on Luanda Airport.

Lubango, capital of Huila Province in southwestern Angola, is a key Angolan Army garrison and headquarters for Angolan and Cuban forces in Military Region Five. The airfield at Lubango is the primary tactical fighter base in southern Angola and the regional air defense headquarters. The Namibian insurgent group (SWAPO) maintains its headquarters and support bases nearby. Lubango is also the center for troop deployment and logistic resupply for the counterinsurgency effort against UNITA guerrillas in southwestern Angola. 25X1

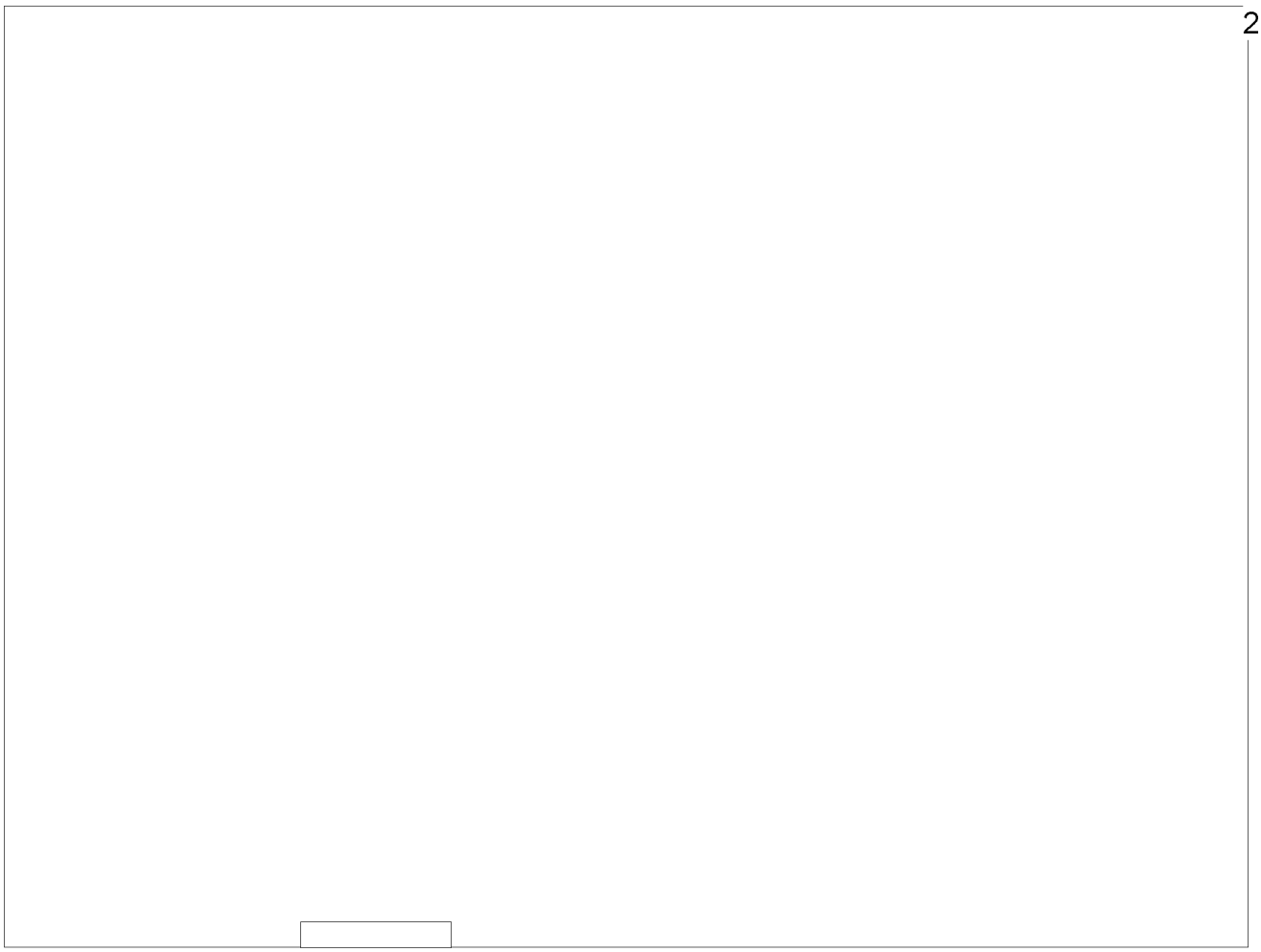
Description. Luanda Airport is adjacent to downtown Luanda and can accommodate military and civilian aircraft of any size. There are two asphalt runways, the larger measuring 3,740 by 46 meters. Luanda also has 26 revetted hardstands. The largest apron measures 730 by 230 meters. Facilities include a control tower, radar, and VOR and ND13 navigational beacons. 25X1 25X1 25X1

Air approaches from all directions are generally favorable except during the annual wet season, which lasts from October to April, when frequent thunderstorms, turbulence, and aircraft icing create hazardous flying conditions. Commercial air service to Luanda includes scheduled flights by Aeroflot and Cubana, as well as the Angolan national airline, TAAG. 25X1

A four-lane all-weather road connects the airfield and the adjacent Luanda city. Luanda's major deepwater port and naval base are nearby at Baia de Luanda (Luanda Bay), and a narrow-gauge railway runs east to Malanje. 25X1 25X1

Lubango is the country's primary tactical fighter base in southern Angola and its only airfield with hardened aircraft shelters. There are two asphalt runways, the largest measuring 2,385 by 30 meters. Eight hardened aircraft shelters and 52 revetted hardstands are adjacent to the main runway to provide parking space and to protect the aircraft from attack. Facilities at Lubango Airfield include a control tower, an aircraft maintenance area, and ground-controlled approach radar. 25X1 25X1 25X1

An all-weather road from the airfield leads to the nearby Namibe Railway and the deepwater port at Namibe. The railway extends 750 kilometers eastward across southern Angola and is the primary means of supporting Angolan and Cuban forces in the south. Most military supplies for the region arrive at the port at Namibe, approximately 150 kilometers west of Lubango. 25X1



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Fuel Storage. Luanda Airport has facilities for the storage of approximately 12,600 barrels of POL at the military location. Approximately 10 kilometers northeast of the airfield are facilities for an estimated 19,000 barrels of POL. The civilian facility has an unknown fuel-storage capacity. Luanda has Type-A and JP-4 jet fuel available. Approximately 9,800 barrels of POL are available at Lubango Airfield with an additional 3,100 barrels located at an adjacent facility. Type-B jet fuel can be obtained at Lubango.

Activity. Soviet deliveries of high-performance fighter aircraft and attack helicopters, which are assembled at Luanda prior to deployment to regional airfields, increased dramatically in 1984. Soviet and Cuban technicians remain permanently at Luanda Airport to assemble and service the newly acquired military aircraft. Soviets and Cubans probably maintain complex equipment at nearby radar and SAM sites, and the Cubans pilot and maintain most of Angola's more advanced aircraft.

25X1

At least 11 Soviet AN-12 Cub transport aircraft have been permanently stationed in Luanda since 1983. Soviet TU-95 Bears periodically deploy to Luanda, accompanied by an IL-62 Classic carrying support

25X1

personnel. The Bears fly reconnaissance missions over the South Atlantic Ocean. 25X1

Lubango is a major base for Cuban combat and support personnel, and most ground combat units there are believed to be Cuban. MIG-21s have been stationed at the airfield since 1978 while MIG-23 Flogger aircraft were deployed to Lubango in July 1984, the first operational deployment in Angola outside of Luanda. about 30 MIG-21s and 10 to 15 MIG-23s at Lubango. 25X1

25X1

Defenses. Defenses in the Luanda area have improved since late 1983 when the insurgents began to increase operations in the northern part of the country. UNITA guerrilla attacks on towns near Luanda, mining of the harbor in 1984, and continued downing of power lines to the city have resulted in a strengthening of security forces in the region. A new Cuban brigade is still forming just outside Luanda. Air defenses have also been improved. Three SA-3 missile sites have been deployed near Luanda—one was installed at the airfield in January 1984. 25X1

Lubango Airfield has MIG-21 and MIG-23 interceptors; air warning and ground-control intercept (GCI) radar; fixed SA-2 and SA-3 surface-to-air missile sites; SA-6, SA-9, and SA-13 mobile air defense missile systems; and antiaircraft guns. 25X1

Zimbabwe

Overview

Since independence in 1980, Prime Minister Mugabe and his ruling Zimbabwe African National Union (ZANU) have slowly moved toward transforming the country into a socialist society. The government easily defeated opponents in the country's first postindependence election in July 1985 and increased its parliamentary majority. Mugabe now is moving to eliminate all traces of political opposition in order to install a one-party state and to allow a more activist government role in directing economic development. 25X1

ZANU has felt little restraint in its efforts to destroy the Zimbabwe African People's Union (ZAPU)—the main opposition party—as a political force. Heavy-handed government tactics over the past three years aimed at undermining popular support for ZAPU have helped fuel an armed dissident movement in western Zimbabwe. The unrest, however, does not pose a direct threat to the stability of the central government.

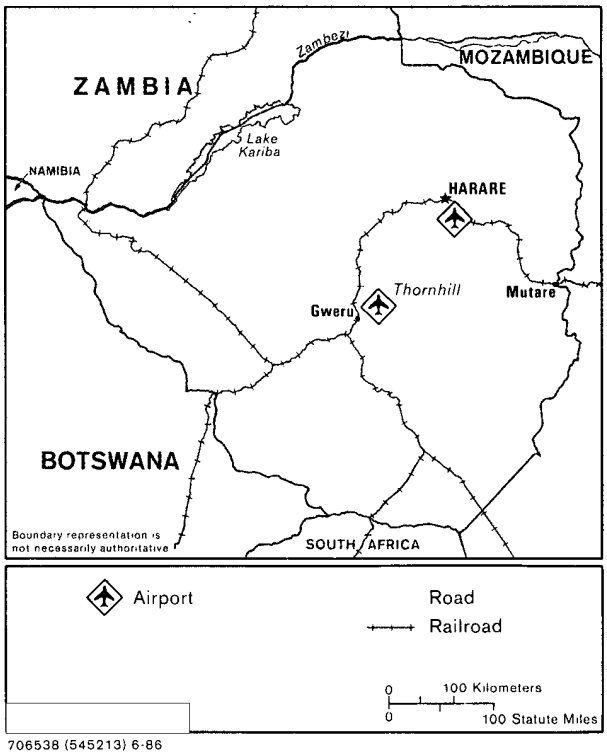
During the summer of 1985, Zimbabwe increased its military presence in central Mozambique to about 9,000 men, following Maputo's request for assistance against antigovernment guerrillas, and began undertaking offensive operations. Senior Zimbabwean military officers and political leaders have expressed concern over their country's expanding involvement in the Mozambican insurgency and in early 1986 urged a reassessment of such operations. A widening of Harare's role in Mozambique also risks stimulating Mozambican insurgent attacks on Zimbabwe's vital supply and transportation lines.

Harare Airport (17°55′ S. 31°06′ E.,

Thornhill Air Force Base (19°26′ S. 29°52′ E.,

Harare Airport, Zimbabwe's primary international airport, and Thornhill Air Force Base are the two main bases of the Zimbabwean Air Force. Harare Airport serves the capital and could handle aircraft of any size. Thornhill Air Force Base—near Gweru—about 200 kilometers southwest of Harare, could accommodate C-130 aircraft. Both are about 800 kilometers inland from the coast and could be valuable in conducting airlift operations to or through southern Africa.

Figure 58
Selected Airfields in Zimbabwe



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Description. Harare Airport has two asphalt runways measuring 4,936 by 49 meters, and 1,358 by 46 meters, The civilian area includes one large concrete parking apron, 15 smaller aprons, a terminal building and control tower, 18 hangars, and at least 57 support buildings. The military support area has a large concrete and asphalt apron, an operations building and control tower, 10 hangars, seven small aircraft shelters, and at least 41 support buildings. The ammunition facility includes 15 revetted buildings and nine unprotected support buildings.

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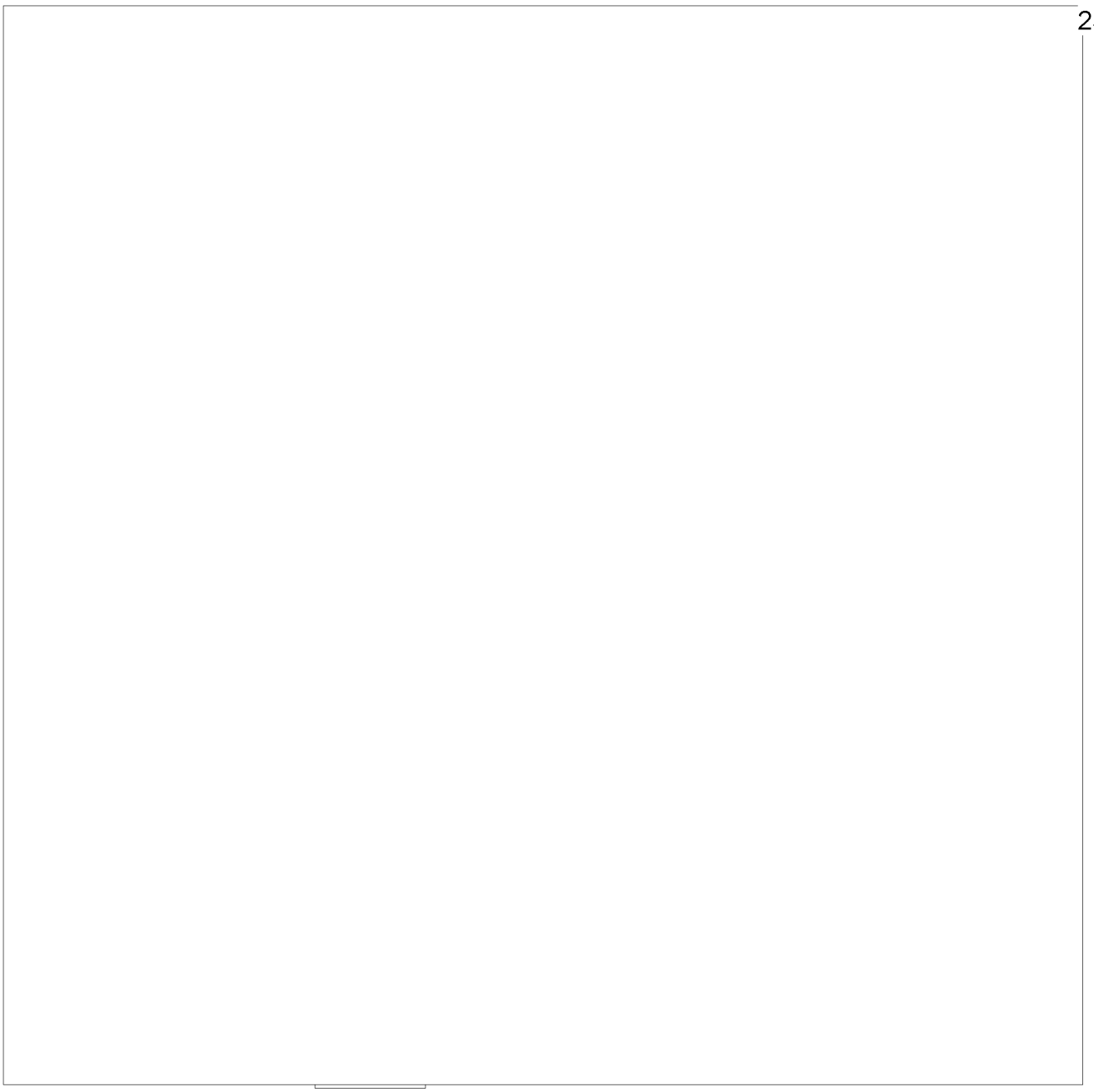

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The airfield could handle about 40 sorties daily of C-5 aircraft delivering about 2,790 tons of cargo. Alternatively, it could accommodate about 88 sorties of C-141 aircraft (and 3,710 tons of cargo) or 160 sorties of C-130 aircraft (with 2,080 tons).

tower-mounted air traffic control radar and a tower-mounted probable IFF radar. The field also has an ILS system and marker beacons.

Thornhill Air Force Base has two parallel asphalt runways measuring 2,662 by 36 meters and 2,371 by 31 meters. The longer runway has paved overruns of 49 and 200 meters, and there are four grass runways of 1,256 meters or less. Parking facilities include two aprons, seven helicopter pads, and two taxiways. Structures include a multibuilding administrative

25X1

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compound, an operations building and control tower, nine large hangars, 12 barracks, two probable warehouses, one security building, and about 70 support buildings. A revetted ordnance storage area at the airfield includes a large headquarters building, nine administrative buildings, and about 70 family housing and barracks. The field is equipped with a VOR beacon, marker beacons, and ILS

Fuel Storage. Harare Airport has a petroleum storage compound consisting of 14 tanks of various sizes plus drum storage, with an estimated storage capacity of at least 42,000 barrels. Thornhill has a fuel storage area with both partially buried and aboveground tanks with an approximately 7,475-barrel capacity.

Activity. As Zimbabwe's primary international airport, Harare Airport offers commercial service to Africa and Europe. The military portion of the field, known as New Sarum Airbase, is concerned primarily with transport, bomber, and helicopter operations. Assigned units are equipped with one to three Canberra light bombers, 20 to 25 transports (C-47, Islander, and Casa 212 aircraft), and 30 to 40 helicopters (Allouette IIIs and some Augusta Bell 205 and 412 models). A Hunter fighter-bomber was seen in April 1985 for the first time; Hunters are normally seen only at Thornhill Air Force Base.

Thornhill is the nation's other Air Force base and is concerned with fighter-bomber, training, and light transport operations. Aircraft assigned there include one to five Hunter fighter-bombers, about two Hawk jet trainers, one to five Marchette SF-260 trainer/light-strike aircraft, nine Cessna FTB-337G light ground-attack aircraft, and a few utility aircraft.

The Zimbabwean Air Force still has not recovered from the sabotage in July 1982 of 13 aircraft (nine of them destroyed) at Thornhill Air Force Base. Zimbabwean officials blamed the incident on dissident white officers aided by South Africans. Pakistani Air Force officers were invited to take over most command and supervisory positions in the force, and Pakistani pilots were doing most of the flying as of January 1985, but now have departed, according to the US Embassy. A British firm was maintaining the aircraft.

Defenses. Zimbabwean air defense aircraft had cannons but no air-to-air missiles or aircraft-mounted radars in late 1984. Zimbabwe has few qualified pilots. Antiaircraft artillery positions are visible at both airfields.

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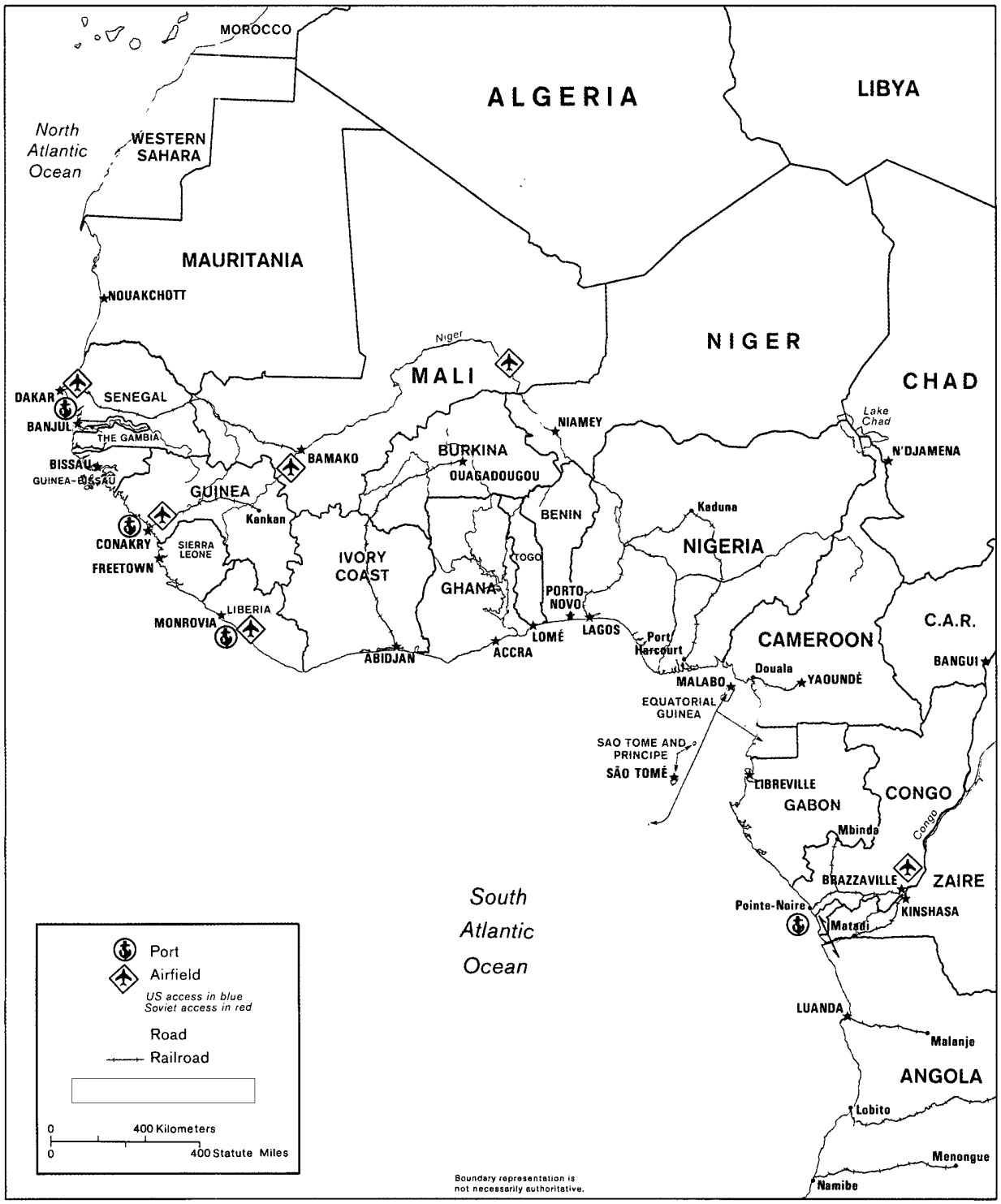
Figure 61
Selected Ports and Airfields in West Africa



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West African Ports and Airfields

Senegal

Overview

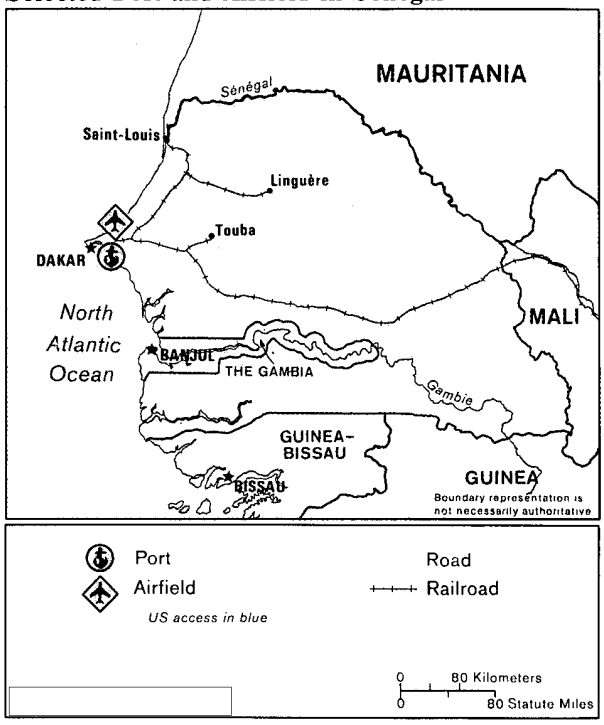
Senegal's location on the bulge of West Africa astride important mid-Atlantic air and sea lanes and its moderate pro-Western political orientation in a volatile region make it important to France and the United States. Senegal has long been one of the strongest and most vocal opponents of Soviet, Libyan, and Cuban interference in Africa. Predominantly Islamic, Senegal is relatively stable, although President Diouf's popularity has declined in the face of chronic economic problems, generational conflicts within the ruling party, and some Islamic fundamentalist ferment that Libya seeks to exploit. Diouf counts heavily on extensive economic and military ties to France to maintain stability. Senegal's apolitical armed forces are one of the best trained and disciplined in Sub-Saharan Africa.

Military cooperation between Senegal and France has remained virtually unchanged since independence in 1960. France maintains naval, air, and ground forces at Dakar's port and air facilities. A mutual defense agreement calls for Paris to intervene at Dakar's request if the country's security is threatened. According to the US Embassy, after Senegal sent troops into The Gambia—an enclave of Senegal—in 1981 to crush a Marxist-led coup, Diouf received President Mitterrand's assurance that France would honor the defense treaty if Senegal invoked it.

Dakar Port (14°41′ N. 17°26′ W.,
Dakar is the second largest port on Africa's west coast (after Lagos, Nigeria). It is midway on main maritime routes from Europe to South America and from New York to Cape Town, South Africa. The port handles most of the country's imports and exports as well as virtually all of neighboring, and landlocked, Mali's trade. Dakar is also the main naval logistics and communications base for France in central and western Africa.

Description. The approach to the harbor is free and clear, although two wrecks are located just outside it. Buoys mark both wrecks and neither is a hindrance to navigation. The entrance into the port is made on a westerly course between breakwaters about 250 meters apart. Dakar is an improved, natural harbor formed by two breakwaters aligned north and south to afford excellent protection. The harbor is approximately 1.9 kilometers long and 1 kilometer wide with depths ranging from 3 to 12 meters, enclosing about 200 hectares. The port has excellent anchorage over a good holding ground of sand and gravel, and can accommodate any size ship. Silting presents no significant problems because dredging is performed routinely to maintain the channel and alongside depths. Tidal currents are weak within the harbor, and swell is only a minor problem in the port during the June to November rainy season.

Figure 62
Selected Port and Airfield in Senegal



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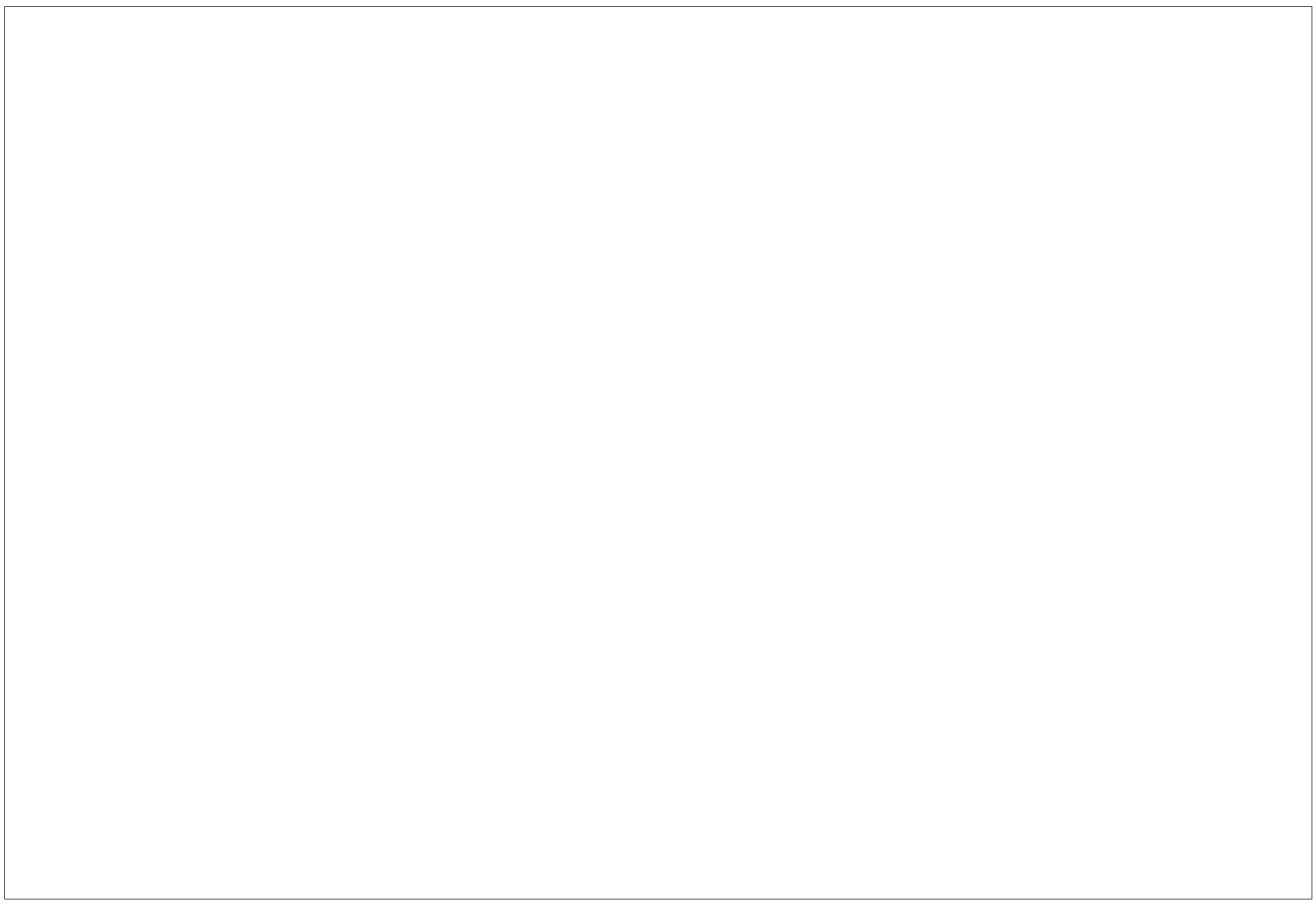

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The port has just over 11,000 meters of deepwater alongside wharfage containing 55 berths in excess of 5.5-meter depths and another 31 berths for smaller ships to depths less than 5.5 meters. Although some quayside cranes and special handling equipment exist in Dakar, the vast majority of alongside berths, including some of the container berths, require the ships' own gear for cargo handling; therefore, most ships calling at Dakar are self-sustaining container types. Harbor equipment includes five cranes of 6-ton capacities; two heavy-lift floating cranes rated at 60 and 120 tons; and four harbor tugs, of which two are operational.

The port has ample and diverse storage facilities. Covered storage includes 46,500 square meters of space in 13 buildings. Eleven of the buildings are dedicated to break-bulk cargo, while the remaining two buildings have a combined storage area of 4,500 square meters reserved for storage of peanuts—Senegal's principal export. In addition, two 50,000-ton storage sheds for phosphate ore are located on the north mole. Open storage for break-bulk cargo is available but limited. Dakar has 3.7 hectares of dedicated container stacking space. Several cold storage buildings provide almost 15,000 cubic meters of storage space, including modern icemaking and ice-crushing equipment.

25X1

Dakar's estimated military port capacity is 39,000 tons per day of break-bulk and container cargo unloaded in 20 effective working hours. However, the use of roll-on/roll-off ships would significantly increase this capacity. The port is cleared by a well-maintained, two-lane bituminous-surface highway and double-track, narrow-gauge rail line, the main route of the Senegalese railroad system.

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Dakar Marine, the largest shipyard, provides the port with extensive ship repair facilities as do two smaller drydocks. The largest repair asset is a recently installed, Norwegian-built floating drydock. It has a lifting capacity of 28,000 tons and can accommodate a ship up to 80,000 dwt.

Fuel Storage. Total crude storage at the refinery for Dakar is 525,000 barrels, and the total refined products storage at 13 locations throughout the area may be as high as 3.1 million barrels if all the locations are used for this purpose. Bunkering is available at all POL offloading berths and at the naval base, with delivery rates of 2,200 barrels per hour for fuel oil and 2,600 barrels per hour for diesel oil. Two bunkering barges are available with delivery rates of 1,630 barrels per hour.

Defenses. The former French naval base at the port is now the sole naval operating base of the Senegalese Navy. France maintains a 450-man force at Dakar harbor with one sea-reconnaissance aircraft. The 762-man Senegalese Navy is capable of guarding coasts and protecting fisheries within the 12-mile limit of the country's territorial waters.

Soviet trawlers operate illegally in Senegalese waters but, by staying near maritime borders disputed with Guinea-Bissau, they diminish their chances of being caught. In addition, there is some evidence to suggest that the Senegalese are reluctant to arrest Soviets violating their territorial waters because they fear the loss of revenues gained by repairing Soviet trawlers at Dakar Marine.

Dakar/Yoff Airport (14°44′ N. 17°29′ W.,

Dakar/Yoff, the primary international airfield for West Africa, is a principal crossroad for air traffic between Africa and Europe, South America, and North America. The airfield is about 12 kilometers northwest of the Senegalese capital of Dakar.

Description. The airfield consists of three asphalt runways. The largest and main runway measures 3,472 by 44 meters. In 1980 the main runway and taxiway were strengthened, upgrading them to accept Boeing-747 and similar aircraft. It can accommodate C-141 and C-5 aircraft and also can support C-130 aircraft at maximum gross takeoff weight. The airfield is equipped with ILS, VOR, HF communications, inner marker beacons, and approach lights.

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Fuel Storage. POL storage is available adjacent to the main passenger terminal. Two aboveground fuel storage tanks can hold about 23,800 barrels while the capacity of a colocated underground storage facility is unknown.

25X1

Activity. French maritime air patrols stage from Dakar. Dakar/Yoff airport was used for refueling by British aircraft during the Falklands war, and in 1983 Senegal permitted US military aircraft to transit the airport on the way to Chad. The United States has ad hoc landing rights for naval air surveillance of Soviet naval task forces in the Atlantic, and Dakar International Airport is a designated emergency landing site for the US space shuttle under a 10-year agreement signed in 1983.

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Defenses. Yoff is surrounded by a 2-meter-high wall broken intermittently by barbed-wire fence and is occasionally patrolled by armed police in vehicles. There are one or two armed policemen at each entrance. On the civilian side of the airport, the 20- to 30-man airport brigade of the National Gendarmerie, headquartered on airport property, provides security. The crack Intervention Group of the National Gendarmerie (GIGN) can arrive at the airport within the hour with heavy weapons and armored cars.

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On the military side of the field, the French man the watchtower and security patrols. French forces include a 400-man air force unit with four transport aircraft, helicopters, and four Jaguar fighter aircraft. In addition, there is a 500-man ground force located at Dakar/Yoff Airport. This force is 50 percent mechanized and 50 percent armored.

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Guinea

Overview

President Conte, who seized power in 1984 after the death of former President Toure, is wrestling with the legacy of economic decline, ineffective socialist policies, and political repression left by his predecessor. Conte's prospects, since he suppressed a coup in July 1985, now rest on his ability to articulate a clear policy of economic reform and to diffuse heightened tribal tensions. The attempted coup appears to have made Conte more amenable to economic reform guidelines proposed by the IMF, despite the political risks involved, and to have underscored his need for substantial US and other Western assistance.

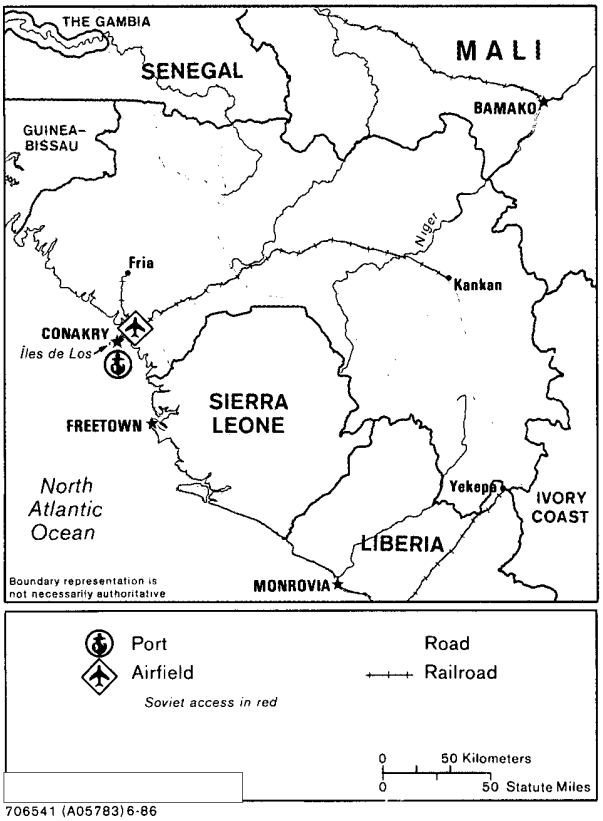
The USSR, however, remains the foremost supplier of Guinean military hardware and training, despite the new government's desire to decrease Soviet influence. Moscow uses its military and economic ties to ensure retention of limited access to Guinean air and naval facilities, which are important in supporting the Soviet presence in Angola, the West African naval contingent of the Soviet Navy, and the Soviet fishing fleet in West African waters. Guinea receives very little economic assistance from Moscow, but the Soviets remain fully entrenched in certain lucrative sectors of that country's economy, including the fishing and bauxite industries. Guinea is likely to continue to accept aid from any source so long as it carries no political strings and does not jeopardize its ties to Moscow that date from 1958.

Conakry (09°31′ N. 13°43′ W.,
Conakry is the country's only general cargo port, handling virtually all maritime imports and exports. Located on the Ile Tombo, this natural, coastal harbor is connected to the Presqu'ile Camayenne by a landfill and causeway. Two overlaping breakwaters protect the inner harbor which encompasses an area of 208 hectares ranging in depth from 2 to 11 meters.

Description. The seaward approach to the harbor is free and clear, while the approach from the south is between the Iles de Los and the Ile Tombo. The entrance channel has a depth of 9 meters and a width of 137 meters. Numerous partially protected anchorage berths are provided 5 kilometers south of the port and east of the Iles de Los in depths of 11 to 15 meters, over fair holding ground of mud and sand.

The port has about 1,900 meters of quayage and can berth two large and five standard oceangoing ships as well as one small ship. Tankers also dock at the large oceangoing cargo berths. In addition, there is adequate supplemental wharfage for tugs and pilot boats. The largest vessel Conakry can accommodate is 43,000 tons. Harbor equipment includes mobile cranes with capacities ranging from 8 to 45 metric tons; a floating crane with a 50-metric-ton capacity, numerous forklifts with 3- to 10-metric-ton capacity;

Figure 65
Selected Port and Airfield in Guinea



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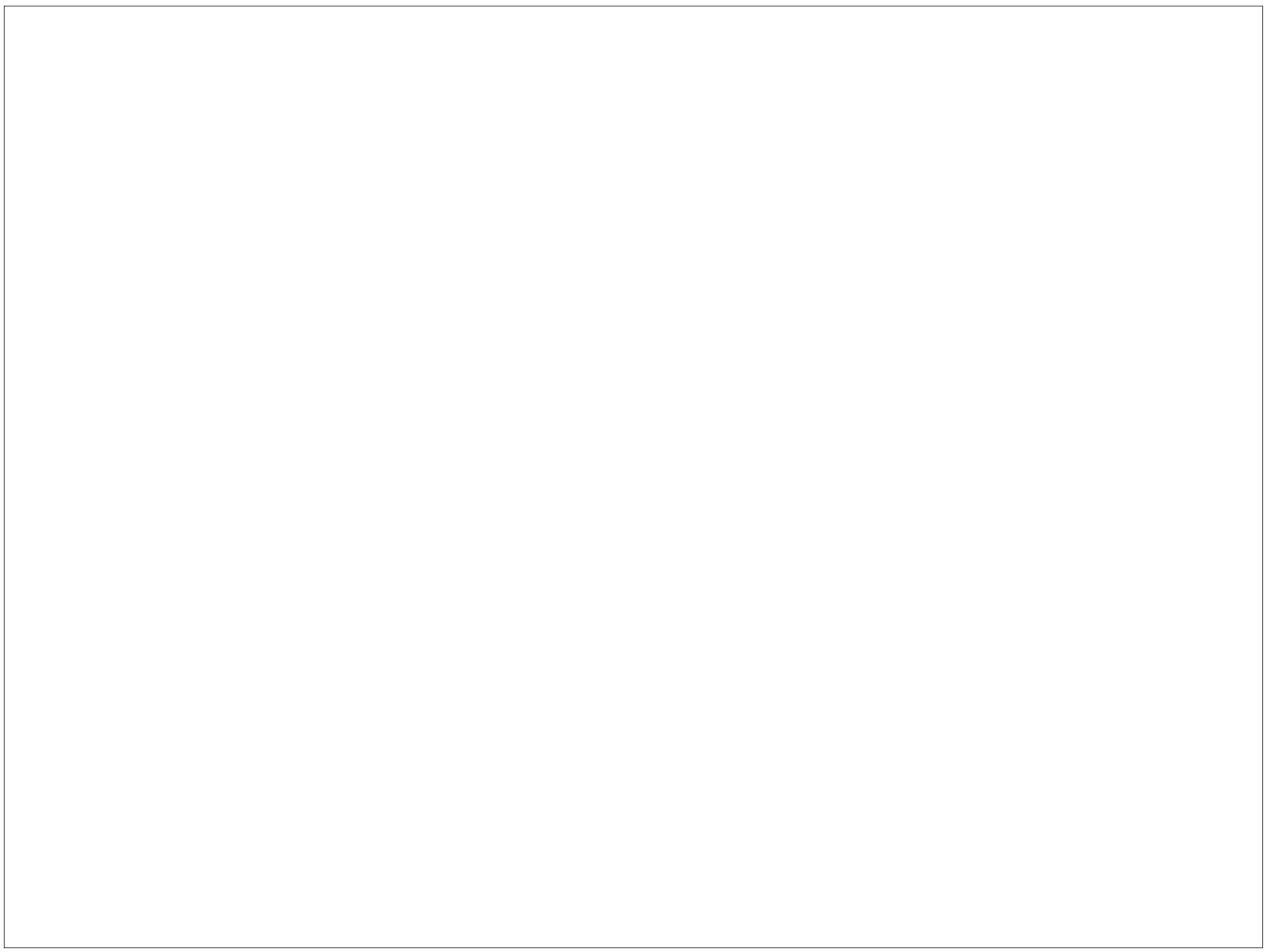

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a banana conveyor system; two alumina ladders with a 100-metric-ton-per-hour capacity; and one portal iron ore ladder with a 1,200-metric-ton-per-hour capacity. There are at least three automotive cranes in the port. At least three tugs with up to 1,600 horsepower are available. Conakry has a military port capacity of 7,000 metric tons per 20-hour working day.

Eighteen buildings provide 32,000 square meters of covered storage area. Open storage consists of a 2-hectare tract for iron ore and an 11-hectare expanse for containers. Four silos with a total capacity of about 100,000 cubic meters store alumina. A standard-gauge railway line with connections to Kankan and to the Fria mines and paved roads connecting to the national highway system clear the port. There is only one 800-ton capacity slipway owned by the Port Authority for naval ship repairs, but it is rarely used and may be abandoned.

25X1

Patterns of Access. The USSR gained access to Guinean naval facilities in 1970 by agreeing to establish a small naval patrol off the coast to deter invasion attempts by exiled Guineans. In the early 1970s, Guinea granted the Soviet Navy logistic support at the port. Conakry is the only West African port routinely used by the Soviets' small, Luanda-based West African naval patrol consisting of five to seven ships, although the number and length of ship-days in port have fallen steadily since the mid-1970s.

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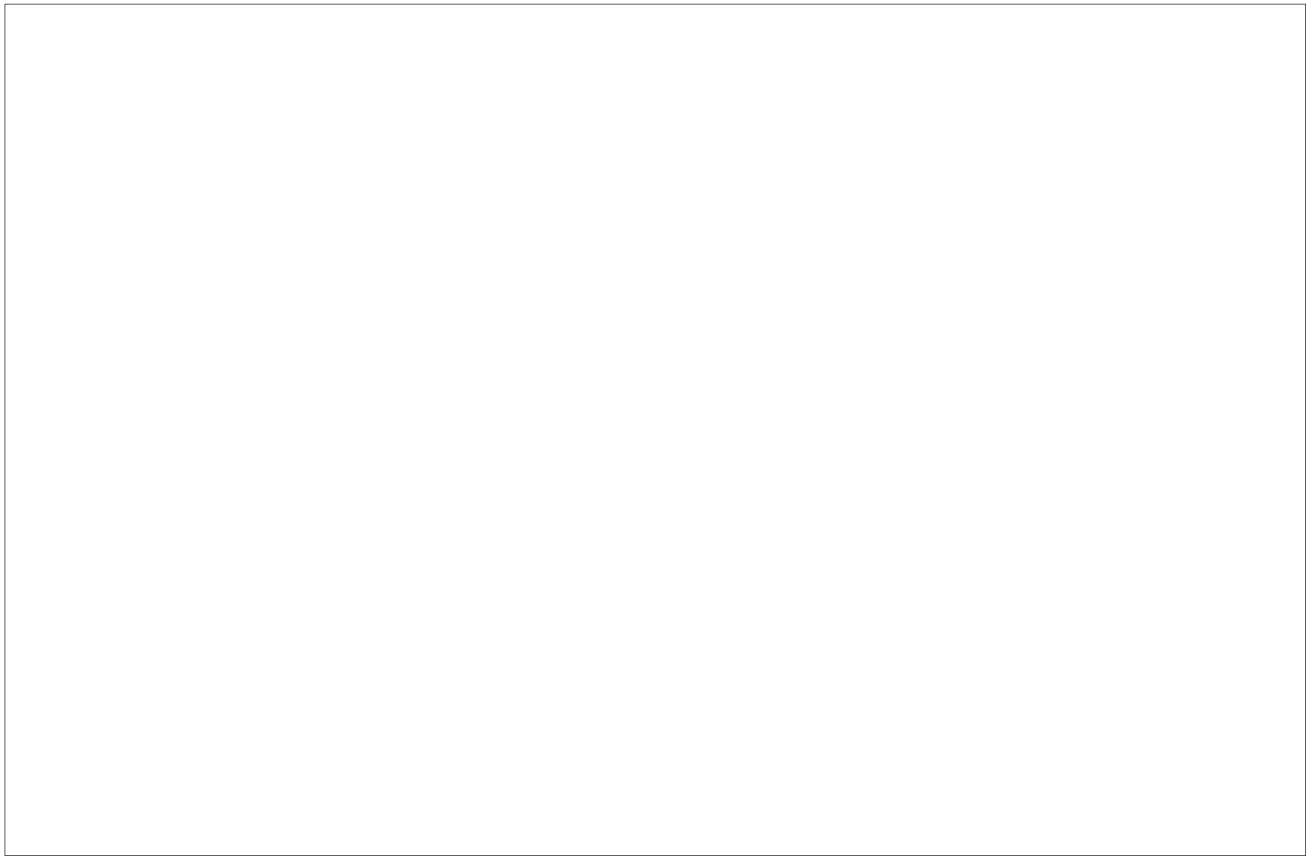

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Guinea continues to reject repeated Soviet proposals to construct a naval installation on the Iles de Los outside Conakry.

Loss of Soviet naval access would somewhat inconvenience Moscow and possibly lead to a search for alternative ports of call such as Cape Verde, Guinea-Bissau, Ghana, and Benin.

Fuel Storage. The total POL storage capacity in the vicinity of the port is about 810,000 barrels.

Defenses. The 500-man Guinean Navy is charged with defending the port as well as patrolling the country's 22-kilometer territorial waters limit and 370-kilometer economic exclusion zone. Only two of seven naval craft are operable, limiting the Navy's effectiveness. Moreover, Guinea completely lacks ship-to-shore communications. The Navy has no base within the port, which forces it to moor its vessels among tugboats and trawlers. Some Guinean naval officers attend Soviet naval schools, and junior officers and enlisted personnel are trained by an in-country cadre of Soviet naval advisers. In 1985, the Navy's defense capabilities were bolstered by a $3 million US grant to purchase military equipment, including patrol boats.

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Conakry Airport (09°34′ N. 13°36′ W.,

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Conakry, the largest airfield in Guinea and the only airport of entry, has facilities that can accommodate international air traffic, as well as the functions of a military airbase. It has a civilian terminal and a separate military operations area.

25X1

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Description. The largest concrete runway, 3,270 by 45 meters, is capable of supporting C-130, C-141, and C-5 aircraft with an estimated daily offloading rate of 2,290, 4,050, and 2,235 tons, respectively. This runway was resurfaced in 1984 and now has new landing aid markers. The total concrete apron area is 76,714 square meters among the three parking aprons. The airfield is equipped with a tower, approach control, VOR, NDB, and VHF/DF. All-weather roads clear the airport, and the port of Conakry is 15 kilometers away. Major drawbacks at the airport include a lack of well-trained ground controllers, poor-quality fuel, and inadequate drainage that makes runway operation difficult during heavy rains. The airport offers only limited repair facilities. These drawbacks, however, do not seem to diminish Soviet interest in access to Conakry.

Fuel Storage. The airport's total storage capacity for all types of fuel is approximately 40,460 barrels at two storage sites at the airfield and one near the port. A-1 jet fuel is available, and the fuel is dispensed by truck.

Activity. During the 1970s, Guinea allowed Soviet TU-95 naval reconnaissance aircraft to use Conakry as a staging area for aerial reconnaissance of US naval activity in the Atlantic. However, mounting Guinean dissatisfaction with the paucity of Moscow's economic and military aid caused Conakry to withdraw TU-95 landing rights in 1977. Since the Soviets lost access to Conakry, they have been forced to stage their reconnaissance aircraft to Luanda via Cuba starting from the Kola Peninsula in the USSR. Luanda is too far south (3,000 kilometers) from Conakry to permit surveillance of Western naval force operations in the central Atlantic. Moscow periodically requests renewed access for TU-95 operations out of Conakry. The Guinean Government also refused transit privileges for Soviet planes transporting Cuban troops to Ethiopia to stem the 1977 Somali invasion.

The Soviets continue to enjoy limited access to Conakry, primarily as a regular transit stop for military transport flights to Angola via Hungary and Algeria. Soviet aircraft typically stop overnight in Guinea for refueling and crew changes before continuing on to Luanda. Planes transiting Guinea include AN-22s, IL-76s, and AN-12s. The IL-76s and AN-12s also are deployed within Angola to support in-country military operations. Soviet IL-62s also use Conakry; they are used to support TU-95 naval reconnaissance deployments to Luanda. 25X1

Defenses. No defenses have been observed. 25X1

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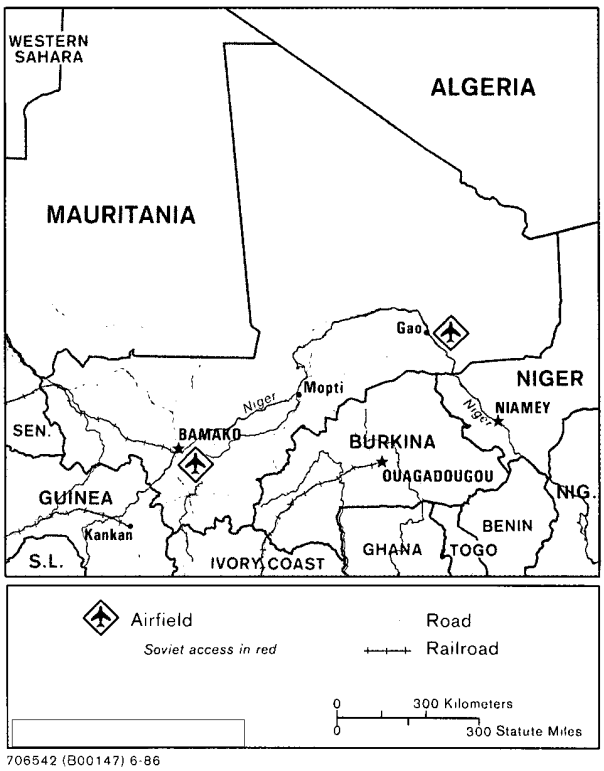
Mali

Overview

Mali, one of the poorest countries in Sub-Saharan Africa, suffers from a deteriorating economy stemming from years of inefficient socialist policies and exacerbated by severe drought, according to US Embassy reporting. President Moussa Traore, who seized power in 1968, has loosened ties to the Soviets and improved relations with France and the United States in search of desperately needed economic assistance that Moscow will not provide. 25X1

We believe, on the basis of a variety of sources, that Soviet ties to Mali are based upon the provision of arms and military training, party-to-party relations, and student scholarships. The USSR continues to be the only military supplier willing to satisfy Mali's desire for expensive and relatively sophisticated weapons. In our judgment, Soviet military aid is designed not only to curry favor with the Malian armed forces—the key political force in the country—but also to advance Moscow's interest in gaining military access to West African targets of opportunity. 25X1

Figure 68
Selected Airfields in Mali



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Bamako-Senou Airport (12°32′ N. 07°57′ W., 25X1

Gao Airfield (16°15′ N. 00°00′ W., 25X1

Bamako/Senou Airport is the main international airport servicing the country. Gao is the most important military airfield in Mali.

Description. The asphalt runway at Bamako measures approximately 2,700 by 45 meters. The five asphalt parking aprons encompass a total area of 73,750 square meters with the largest measuring 343 by 100 meters. The airfield is capable of supporting C-130 and C-141 operations. Air traffic control capabilities include a control tower 25X1

A repair hangar, freight warehouse, and six aircraft sheds are available. The airport is serviced by a two-lane bituminous road to Bamako, and a railroad line at Bamako that goes to Dakar, Senegal. 25X1

Gao Airfield is currently undergoing expansion with Soviet aid. For several years the Soviets have been lengthening runways at the airfield to approximately 3,000 meters—too long for current Malian needs. The asphalt runway presently measures 2,745 by 45 meters. The two asphalt aprons encompass a total area of about 20,000 square meters with the largest measuring 128 by 98 meters. Navigational aids include a control tower, VOR-DME, and NDB. There are several storage sheds and warehouses in the military support area. The airfield is cleared by a two-lane bituminous road to Gao. The airfield is capable of supporting C-130 operations with an offloading rate of 210 tons per day. 25X1

25X1

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Fuel Storage. Jet fuel is available at Bamako, with a storage capacity for all types of fuel of approximately 23,800 barrels, dispensable by truck or hydrant. A-1 jet fuel accounts for more than 630 barrels of the storage capacity and is dispensable by hydrant.

Activity. The Soviet military presence in Mali dates from the early 1960s when about 30 military assistance personnel began working with the armed forces. The number of Soviet military advisers swelled to 600 in 1976, but has since declined to the current level of about 150. The USSR could use Mali's two principal airfields to transport Soviet arms and supplies to client states in southern Africa or even Latin America in an emergency. For example, in 1975 Mali was among several left-leaning African states that allowed Soviet cargo aircraft to transit their territory when Moscow mounted an arms ferry to Angola to stave off the defeat of the MPLA faction that now rules Luanda.

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[redacted]

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Gao Airfield also is protected by Soviet maintained missiles, and a Malian Army camp is situated just north of the runway. [redacted]

25X1

Liberia

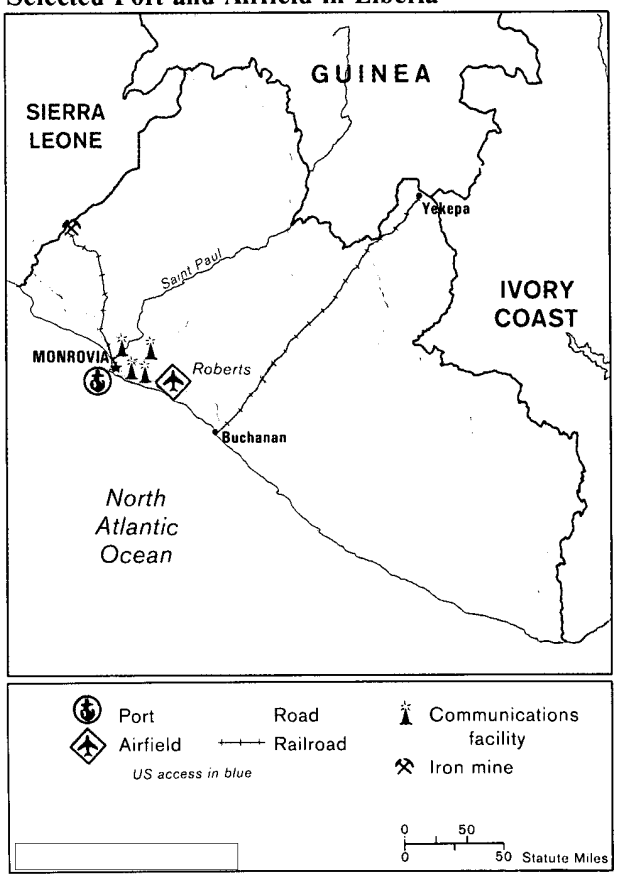
Overview

Liberia's Port of Monrovia and Roberts International Airport—which were built by the United States during World War II—are the only strategic sites in West Africa to which US military forces have the right of access; the United States negotiated special access rights when it turned these facilities over to Liberian control. US military priority access to Liberia's port and airfield could help provide for the rapid staging of US forces into Africa, the Middle East, or Southwest Asia. Communication facilities located in Liberia constitute the largest block of official US assets in black Africa. These assets include a Voice of America relay station serving all of Sub-Saharan Africa as well as parts of the Middle East and Europe;

[redacted] US private investment in Liberia totals $430 million—the largest in black Africa after Nigeria. [redacted]

Liberia has experienced severe economic decline since the mid-1960s and political fragility under Head of State Doe, who seized power in 1980. The political and economic climate in Liberia is likely to remain uncertain and subject to sudden change, even though Doe successfully put down a coup attempt in November 1985 and inaugurated his civilian government two months later. He continues to face a difficult array of political and economic problems that recently have sparked popular protests and grumbling in the military. Most Liberians, including a majority of the military, remain favorably disposed toward the United States, however, which should limit opportunities for Soviet and Libyan meddling in the event of serious instability. [redacted]

Figure 71
Selected Port and Airfield in Liberia



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Monrovia Port (06°20′ N. 10°47′ W., [redacted] 25X1
[redacted] 25X1

Monrovia is Liberia's primary and largest port, handling most exports and imports. [redacted] 25X1

Description. The Liberian National Port Authority operates the manmade port formed by two rock breakwaters extending approximately 2.4 kilometers into open ocean and encompassing 304 hectares of protected water. The harbor's approach channel is 2 to 5 kilometers long and 150 meters wide with a depth of 15 meters. The harbor has ample anchorage over good holding ground, but silting presents a problem that requires periodic dredging. [redacted] 25X1 25X1

The port consists of one 582-meter-long commercial quay with container and general cargo berths. There also are three large narrow concrete piers equipped with specialized machinery for loading iron ore. One POL berth handles large tankers at an offshore bresting platform. Ship's gear is mostly employed for offloading containers and break-bulk cargo. Monrovia has no floating or portal jib cranes. Port cargo handling equipment is comprised of two iron ore automatic loading systems; a fixed jib crane with a 50-ton capacity; and mobile cranes with 3, 5, 7, and 25 ton capacities. There are four harbor tugs, and two barges of unknown capacity are also available.

Covered storage facilities include four transit sheds adjacent to the quay, affording 16,300 square meters of space; and seven storage silos, each with a 2,500-metric-ton capacity, devoted to the storage of latex rubber. There are 25.5 hectares of open storage within the port. Monrovia's estimated military port capacity is 2,300 metric tons of cargo per day, unloaded in 20 effective working hours. The port is cleared by two hard-surfaced roads and two rail lines. The two rail lines serve only the iron ore pier; one standard-gauge single track extends to the Bong iron ore mines while the other, a narrow-gauge line, continues inland to the Sierra Leone border.

Ship repair facilities are limited to one small floating drydock capable of lifting 250 tons, with a maximum draft of 2.4 meters and a synchrolift of 250-ton capacity owned by a private fishing company.

The port has been plagued by a number of serious problems. Management over the past several years has been ineffective, the marginal wharf is rapidly deteriorating, and equipment and spare parts shortages abound. The Liberian Government proposed a plan for rehabilitating the port in February 1985 to a group of prospective financial donors, but the outcome of the negotiations are uncertain, given Liberia's deteriorating economic situation.

25X1

25X1 The port handles about 12 million tons of commercial shipping traffic annually and supports the country's agrimineral export operations. Some 66 percent of all world shipping is under Liberian flag-of-convenience registry, the world's largest.

25X1

Fuel Storage. The POL terminal contains a total of 16 tanks of redefined products between them with a combined storage capacity of 34,000 metric tons. In addition, the Liberian Petroleum Company can provide another two tanks with a total storage capacity of 47,800 metric tons. Diesel fuel and a variety of fuel oil blends are available in the port.

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Defense. The Port of Monrovia is protected by a security force employed by the National Port Authority and by the Liberian National Coast Guard (LNCG) whose main base is located there. The force does not have its own pier, however, and all of the Coast Guards' six patrol craft are out of service because of a lack of spare parts and proper maintenance. Even when the craft are operational, they are not sufficient to protect the country's 370-kilometer economic zone and are limited to harbor patrol operations. The boats cannot effectively patrol areas more than 90 kilometers off the coast because they lack seakeeping ability for periods longer than two to three days. Consequently, Liberia relies on the monitoring of radios from friendly ships as a means of guarding its territorial waters. Liberia's Coast Guard has close ties to the US Coast Guard which provides all new officers with basic officer training in the United States. Liberian army units are stationed in and around the city of Monrovia, but none are posted at the port proper.

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25X1

25X1

Roberts International Airport (06°14′ N. 10°22′ W.,

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Roberts International, located 50 kilometers southeast of Monrovia, is the country's main civilian airfield and its chief port of entry. The airport provides

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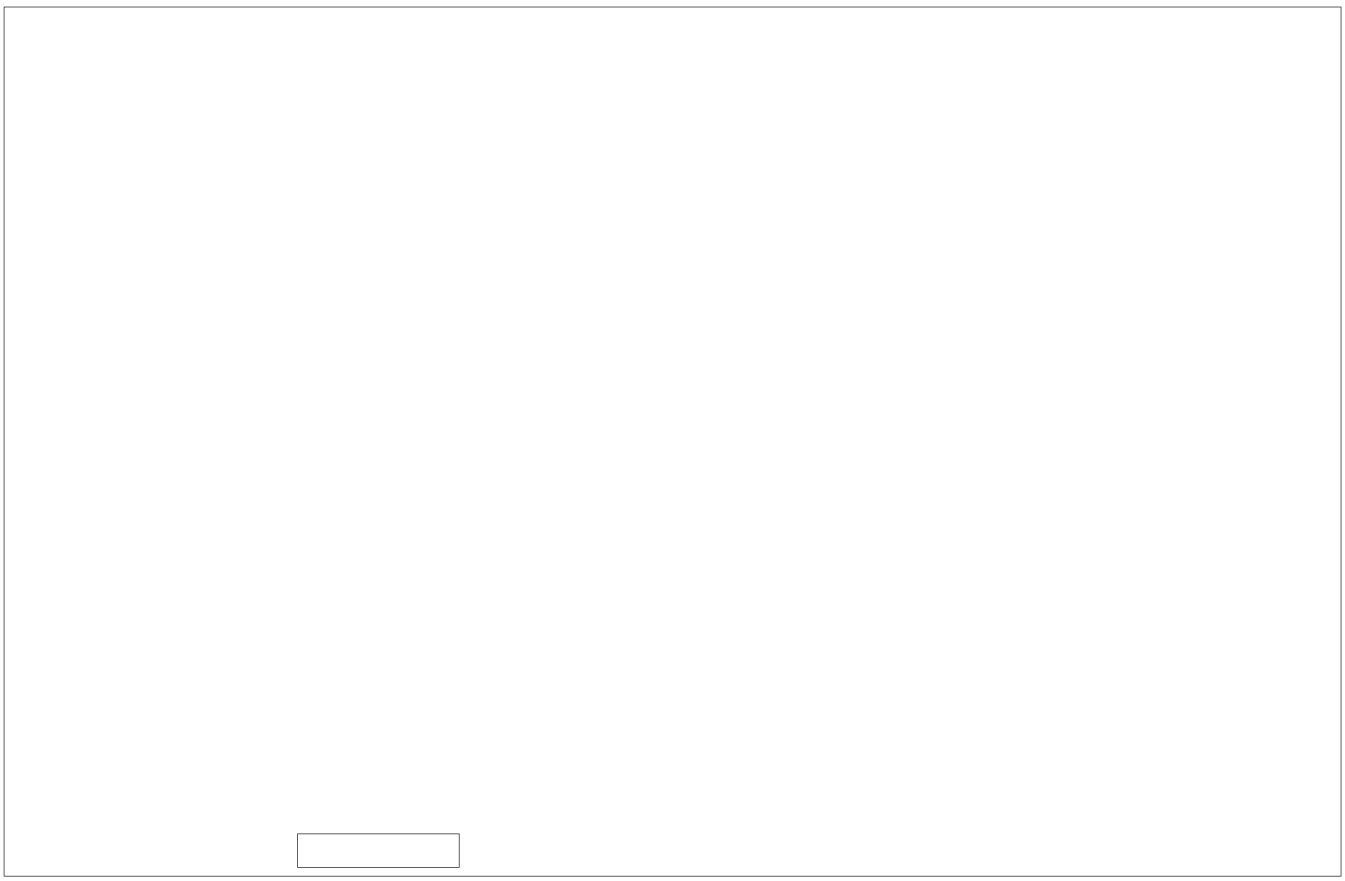

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contingency access for the United States to the rest of the continent and the South Atlantic Ocean. Pan American World Airways operates and maintains the field under contract to the Liberian Government.

Description. The 3,332- by 45-meter asphalt runway is capable of supporting C-130, C-141, and C-5 operations. An intersecting runway is abandoned. The airport is equipped with a control tower, approach control, VOR-DMO, and ILS. A new 27,591-square meter concrete parking apron was recently completed at the field.

Fuel Storage. The recent completion of a new 4,760-barrel fuel storage and distribution system enhances the airport's usefulness. This upgrades the total airport storage capacity to 9,520 barrels.

Activity. In 1954 the United States and Liberia exchanged notes authorizing Washington's use of Roberts International Field "during a national emergency." The United States used the airfield during the 1978 Shaba crisis, but inadequate fueling, servicing, and storage facilities hampered its usefulness. The USAF completed an upgrading of the facilities in 1984 to rectify these defects. Pan American World Airways flies four times per week into Roberts. Aeroflot flew TU-154s into the airport prior to the Soviet airline's expulsion from the country in July 1985.

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Defenses. Overall security at Roberts International Airport is lax. The civilian field is protected by a private contingent of 75 local security guards hired by the airport and augmented by 20 Liberian army personnel stationed on the premises. Local residents cut holes in the fence surrounding the airport to

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facilitate travel through, instead of around, the field, and the fenced perimeter is patrolled randomly and infrequently. There are unmanned entry points

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There are no known antiaircraft weapons in the country.

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Congo

Overview

Shortly after independence from France in 1960, Congo turned sharply to the left and established close ties to the Soviet Union. In the late 1970s, however, growing economic problems and irritation at the lack of Soviet development aid caused Brazzaville to look for more assistance from the West, particularly France. The US Embassy reports that President Denis Sassou-Nguesso continues efforts to attract more Western economic aid and investment needed both to help weather the current recession and for future oil exploration and development. Brazzaville's pragmatism, in our judgment, is motivated by its belief that increased Western investment and aid are critical to economic development and disappointment with the quality of Moscow's military assistance program. The US Embassy reports that, since 1981, France alone has accounted for slightly more than half of Congo's total annual imports, and Congo has become the third-largest US trading partner in black Africa.

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Nonetheless, Sassou's commitment to Third World ideology, the importance of Marxist political controls to ensuring domestic stability, fears of fostering serious opposition from leftists, and the need to maintain access to Soviet arms work against any fundamental shift to a Western political orientation or alignment. In our view, Western reluctance to provide major military hardware and to offer terms competitive with the USSR leaves Brazzaville little choice but to preserve ties to Moscow and access to Soviet arms, a critical element in ensuring Army support for Sassou's government. We believe Congo's importance would increase significantly, however, if the Soviets lost access to Luanda, in Angola. In such a case, we would expect Moscow to expend substantially more resources to encourage the emergence of a more radical regime in Brazzaville in hopes of gaining military access, particularly if no alternative were available elsewhere in the region.

Pointe-Noire Port (04°47′ S. 11°50′ E.,

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Description. Pointe-Noire is the only port serving Congo and is a major transshipment point for goods destined for the Central African Republic, eastern Gabon, and southern Chad. The port also serves as the primary maritime point of entry for military supplies for the entire region.

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Pointe-Noire is located near the southern border of the country in an improved natural harbor. The port consists of a breakwater-protected harbor with a water area of approximately 100 hectares with depths of 4.6 to 13.0 meters. The tidal range is 1.6 meters.

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Figure 74
Selected Port and Airfield in Congo

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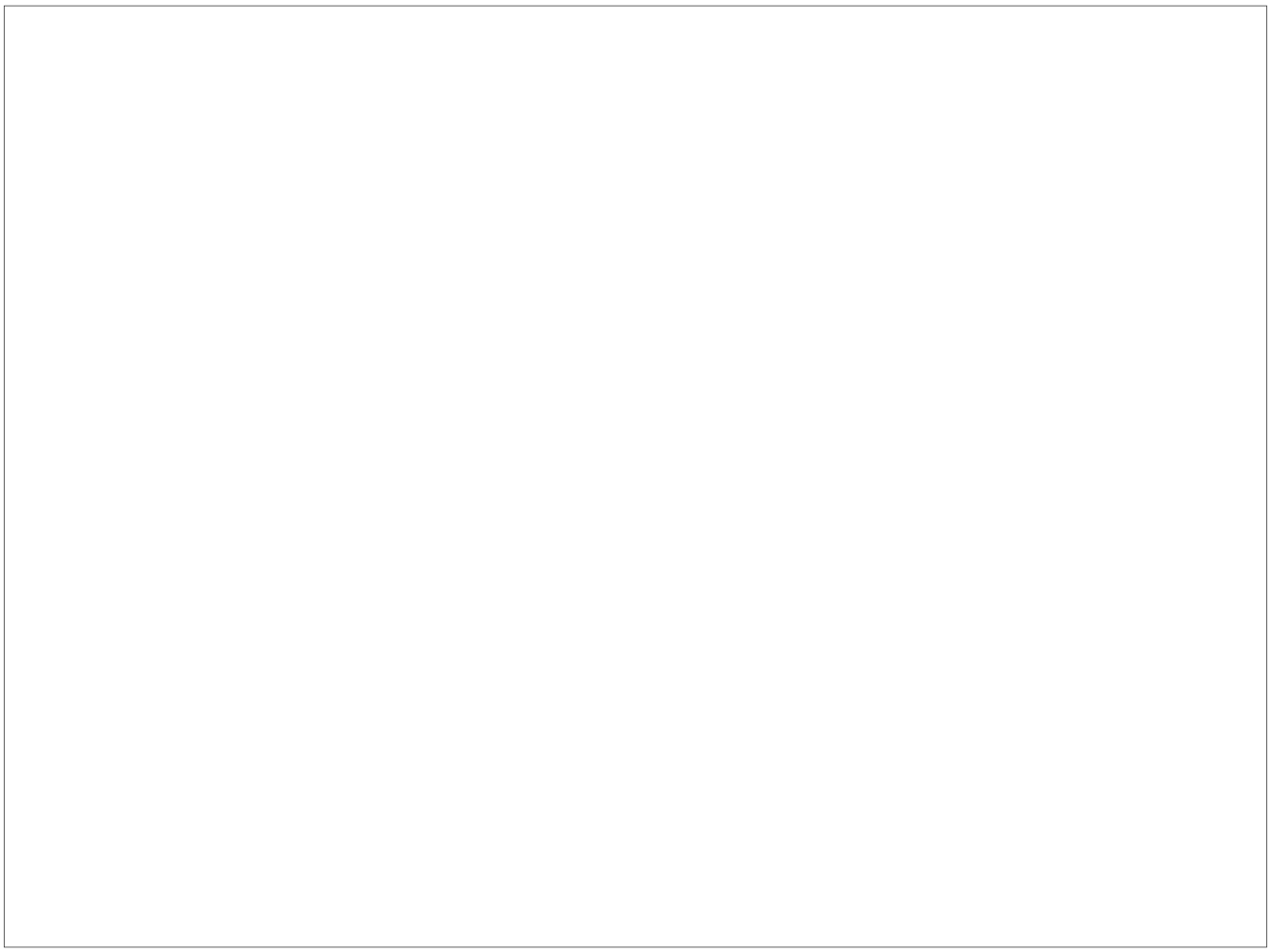

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The approach to the port is from the northwest and is free and clear. Vessels enter the port directly from the sea through a channel 200 meters wide with a minimum depth of 10 meters. An anchorage area with unlimited space, in depths of 10 to 15 meters over good holding ground of mud and sand, is available 2 to 3 kilometers from the entrance to the harbor. Alongside berths are available at Quay G, Quay D, Mole 1, and various other quays within the harbor. Quay G has a tow ore and one container berth with depths of 13 meters and a total linear wharfage of 515 meters. Quay D has five general cargo berths with depths of 6.7 to 9.0 meters and total linear wharfage of 712 meters. Mole 1 has three general cargo berths with depths of 8.5 meters and a total linear wharfage of 952 meters. In addition, there is a 180-meter-long wharf with depths of 2.4 to 4.6 meters used by fishing vessels and a 380-meter-long wharf with depths of 4 meters used by lighters. Total wharfage present in the harbor equals 2,520 meters. Cargo handling equipment consists of one dry bulk ore loader system, two container top-pick carriers, two portal jib cranes, several mobile cranes, and numerous forklifts. There are no container cranes at the container berth. Three tugboats are available for towage, each rated at 1,800 horsepower. [redacted]

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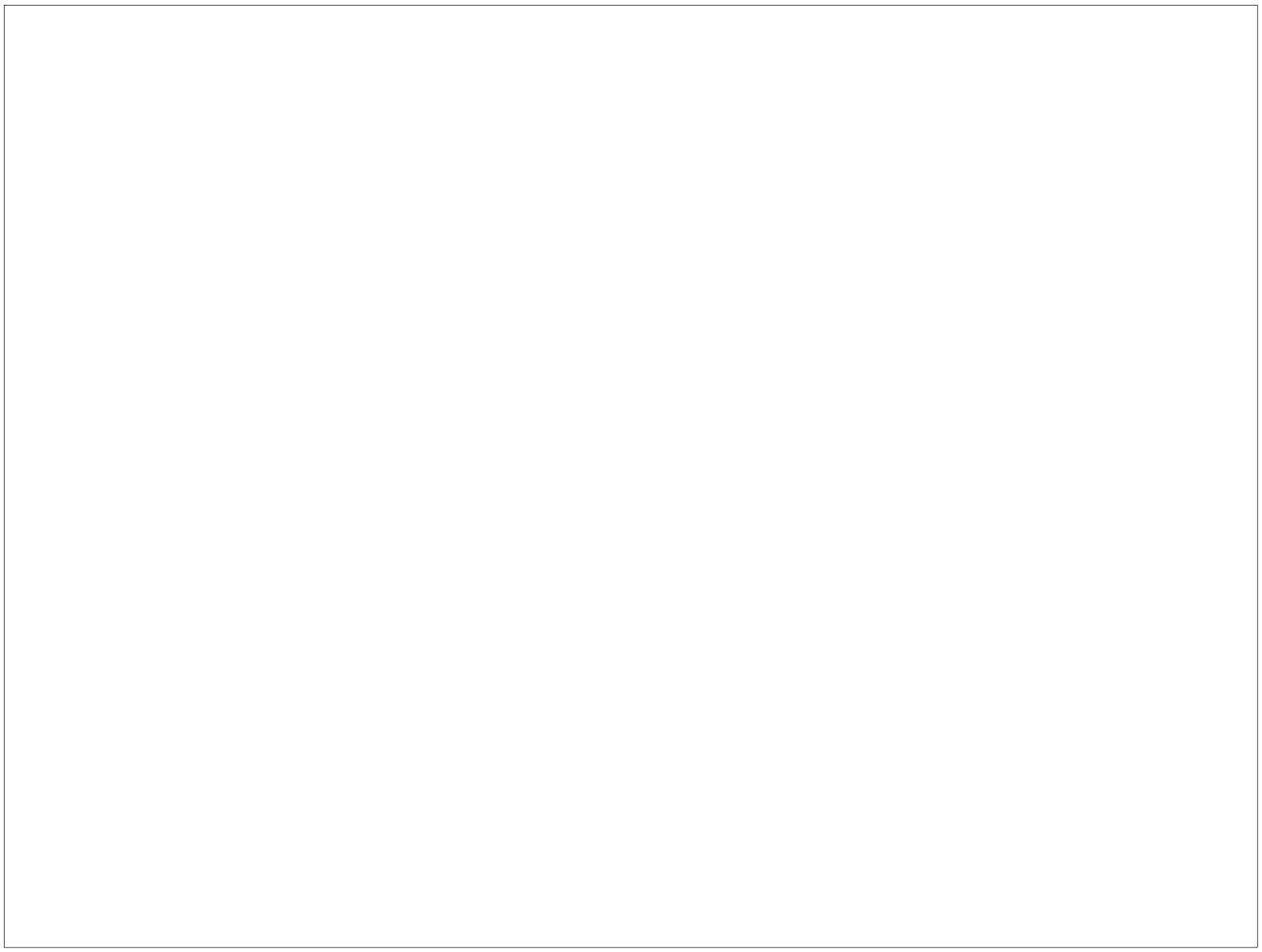
Pointe-Noire has approximately 43,500 square meters of covered storage in 13 transit sheds. There are



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380,442 square meters of open storage available, including 5.1 hectares for manganese ore, 1.5 hectares for containers, 16.1 hectares for timber, and 2.8 hectares for general cargo. The estimated military cargo capacity is 5,300 tons per day. A small ship repair yard has one marine railway with a hauling capacity of 750 tons. The port is cleared by one narrow-gauge, double-track railroad line and one bituminous road.

Current development projects include the extension of Mole 1 for the possible construction of a container ro/ro terminal, and a mole between Quay D and Mole 1 for fishing vessels.

Patterns of Access. Over 3.2 million tons of general cargo move annually through the port. Despite the repeated refusals by several Congolese leaders, Moscow still hopes to acquire naval base rights at Pointe-Noire and to conclude a mutual defense treaty under which it could intervene at Congo's request. We believe the Soviets seek base rights as a contingency should Moscow lose access to neighboring Angola, where Luanda serves as the primary support site for Moscow's small West African naval patrol and periodic Soviet TU-95 naval reconnaissance flights in the South Atlantic. From the Soviet perspective, Congo facilities are also useful to support Cuban military

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who reports that there are normally between 500 and 1,000 Cuban troops in Pointe-Noire on leave from Angola.

Fuel Storage. An unknown amount of POL storage is available. Bunker fuels are available by pipeline at the POL berth at Mole 1 which has a depth of 9.4 meters and Quay D.

Defenses. The Congolese Navy has a base at Pointe-Noire, including one company of naval infantry. Maintenance problems plague all 11 naval ships at Pointe-Noire, limiting their effectiveness. Also, there is a garrison of unknown size located near the port. Many Congolese naval officers have been trained in France, with some now receiving training in China.

Brazzaville/Maya Airport (04°15′ S. 15°15′ E.,

Description. Brazzaville/Maya Airport, 375 kilometers east of Pointe-Noire, is the country's primary international airfield. It is capable of supporting C-130, C-141, and C-5 operations, with a tonnage-per-day offloading rate for each aircraft of 1,870, 2,360, and 1,675, respectively. The asphalt runway measures 3,278 by 45 meters. The four concrete aprons encompass a parking area of about 80,000 square meters, with the largest measuring 704 by 90 meters. Air traffic control capabilities include a control tower, approach control, NDB, ILS, and VOR. Cargo handling equipment includes one 10-ton crane, two 7-ton cranes, two conveyor belts, one 6-ton forklift, and one 10-ton forklift. Several warehouses and storage sheds, including cold storage, are available. A repair hangar measuring 71 by 66 meters has been completed on the civilian side of the airfield. The hangar has a central high-bay section that measures 62 by 49 meters with a height of 17 meters. The airport is cleared by a four-lane bituminous road and a railroad line from Brazzaville to Pointe-Noire.

Fuel Storage. The airport boasts a total storage capacity for A-1 jet fuel of 1,260 barrels, which can be dispensed by hydrant or truck.

Activity. In February 1985, two AN-12s, possibly Aeroflot passenger aircraft, and several MIG-21s were sighted at Brazzaville Airport. The focus of Soviet attention and activity, however, has shifted to Pointe-Noire Airfield, which is being used to support logistic operations for Cuban units in the Angolan exclave of Cabinda as well as to support routine movement of Cubans to and from Angola.

Defenses. Brazzaville/Maya is the headquarters for the Congolese Air Force. The tactical capabilities of the country's MIG-17 and MIG-21 pilots are considered poor, and the Air Force probably remains incapable of fighting an air war. Also, ground forces are garrisoned in Brazzaville. The Soviets installed 12 self-propelled and 24 towed antiaircraft guns at Brazzaville Airfield in 1984.

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